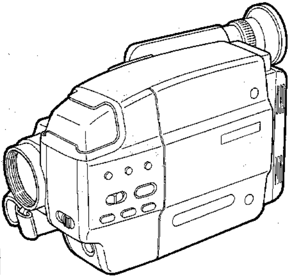
1991

MITSUBISHI

Service Manual

VIDEO CAMERA/RECORDER



MODEL

HS-CX1(A)
HS-CX1(B)
HS-CX1(E)
HS-CX4(A)
HS-CX4(B)
HS-CX4(E)

VHS C
PAL

Only cassettes marked VHS-C can be used with this VIDEO CAMERA/RECORDER.

SPECIFICATION

Tape Format	VHS-C 1/2" high-density video cassette tape
Power Source	DC 6.0V
Power Consumption	Approx. 6.4W[CX4], 5.8W[CX1]
Signal System	PAL System
Video Recording System	Azimuth helical scanning system
Luminance	Frequency modulation recording
Color Signal	Low frequency conversion subcarrier phase shift recording
Hi-Fi Audio Recording System	Azimuth helical scanning system, Frequency modulation, deep layer recording[CX4 only]
Linear Audio Track	1 track
Tape Speed	23.39 mm/sec(SP mode) 11.70 mm/sec(LP mode)
Record/Playback Time	45 min. with EC-45 cassette (SP mode) 90 min. with EC-45 cassette (LP mode)
Video Output	1.0 Vp-p,75 ohm unbalanced AV OUT/EDIT socket
Audio Output	–6dBs, 1k ohm unbalanced AV OUT/EDIT socket

Pick Up	1/3"-format CCD
Minimum Required Illumination	5 lux
Lens	F1.8, f6~48mm 8:1 power zoom lens with auto iris control Filter diameter 49 mm
Viewfinder	Electronic viewfinder with 0.6"black/white CRT
White Balance Adjustment	Full-auto/selectable FIX, INDOOR or OUTDOOR
Operating Temperature	0°C ~ +40°C
Operating Humidity	30% ~ 80%
Weight	Approx. 590g
Dimensions	105(W) x 112(H) x 155(D)mm

AC POWER ADAPTER DA-M1(A,B,C)

Power Source	AC 110 ~ 240V; 50/60Hz
Power Consumption	Approx. 19W
Rated Output Voltage	DC 6.0V
Rated Output Current	1.8A(VIDEO CAMERA/RECORDER), 1.3A(Battery)
Charging System	Constant current, voltage controlled
Dimensions	65(W) x 39.5(H) x 138(D)

- Weight and dimensions shown are approximate.
- Design and specifications are subject to change without notice.

MITSUBISHI ELECTRIC

CONTENTS

SAFETY PRECAUTIONS 1
CONNECTION 3
DISASSEMBLY 4
1. Case(Outer)Disassembling Procedure 4
2. Disassembling Chassis unit 6
3. Disassembling Case unit(L) 8
4. Disassembling Power knob of the Case unit(R) .. 10
5. Disassembling Eject knob of the Case unit(R) 10
6. Disassembling Release button of the Case unit(R) 10
7. Disassembling Other parts of the Case unit(R) ... 10
8. Disassembling Front panel unit 12
9. Disassembling AC Power Adapter 12
10. Disassembling EVF(Electronic View finder) unit 13
11. Disassembling Camera unit 14
12. Disassembling Lens unit 15

Replacing CCD Image Sensor 16
Table of Extension Jigs 17
Using Extension Jigs 18

Adjusting VCR Unit Circuit 20
  Location of Adjustment Points(VCR Section) 22
  Power Supply Circuit 23
  Servo Circuit 23
  Y/C Signal Circuit 24
  Normal Audio Circuit 28
  Hi-Fi Audio Circuit 28
  Character Display Circuit 29

Adjusting Camera Unit Circuit 31
  Location of adjustment Points (Camera Section) 34

MECHANICAL ADJUSTMENT 45
1. Jigs and Measuring Instruments Required for Mechanism Adjustment 45
  1-1 Jigs for Adjustment 45
  1-2 Other Tools and Measuring Instruments Required 45
  1-3 Soldering points of lead wire 45

2. CLEANING 46
  2-1 Cleaning the video head 46
  2-2 Cleaning the tape path system 46
  2-3 Cleaning the reel disk driving system 46

3. HOW TO ATTACH THE MASTER PALANE 46

4. HOW TO REPLACE THE PRINCIPAL PARTS ..47
  4-1 Cassette housing replacement 47
  4-2 Damper unit replacement 48
  4-3 Drum assembly replacement 49
  4-4 Loading motor replacement 49
  4-5 Reel disk replacement 50
  4-6 Reel gear replacement 50
  4-7 Sync belt replacement 51
  4-8 Clutch unit replacement 51
  4-9 A/C head replacement 52
  4-10 Pinch roller assembly and Pinch roller replacement 53
  4-10-1 Pinch roller assembly replacement 53
  4-10-2 Pinch roller replacement 53
  4-11 Slant T replacement 54
  4-12 Takeup guide arm replacement 55
  4-13 Supply impedance roller replacement 55
  4-14 Capstan motor replacement 56
  4-15 Supply tape guide assembly and Supply guide roller replacement 57
  4-15-1 Supply tape guide assembly replacement 57
  4-15-2 Supply guide roller replacement 57
  4-16 Takeup tape guide assembly and Takeup guide roller replacement 58
  4-16-1 Takeup tape guide assembly replacement 58
  4-16-2 Takeup guide roller replacement 58
  4-17 Mode switch replacement 59
  4-18 Cam T replacement 60
  4-19 Tape guide stopper assembly replacement 61

5. ADJUSTMENTS 62
  5-1 Back tension and Tension pole adjustment 62
  5-2 FM envelope check and adjustment 63
  5-2-1 Guide roller Check 63
  5-2-2 Supply guide roller height adjustment 63
  5-2-3 Takeup guide roller height adjustment 63
  5-3 Phase adjustment(coarse) 64
  5-4 FM waveform flatness check 65
  5-5 A/C head adjustment 65
  5-5-1 A/C head height, azimuth and slant adjustment 65
  5-6 GR-lever roller tape running adjustment 66
  5-7 Phase adjustment(fine) 66

KEY TO ABBREVIATIONS 67
CHIP PARTS REPLACEMENT 68

PARTS LIST 69
  1. Outer parts 69
  2. Cabinet parts 70
  3. Chassis Assembly Parts 71
  4. Case Assembly(Right side) Parts 72
  5. Case Assembly(Left side) Parts 73
  6. EVF(Electronic View finder) unit Parts 74
  7. Camera Unit Parts 74
  8. Front panel Assembly Parts 75
  9. AC Power Adapter Parts 75
  10. Packing Parts 76
  11. Electrical Parts 78
  12. Deck Assembly

SAFETY PRECAUTIONS

INTRODUCTION

This manual provides service information for the adjustments of mechanical and electrical operations.
Due to design modifications, the servicing procedures and data given in this manual are subject to possible change without prior notice.

WARNING: Many of the programs broadcast by television stations are protected by copyright and Federal law imposes strict penalties for copyright infringement. Some motion picture companies have taken the position that home recording for noncommercial purposes is an infringement of their copyrights. Until the courts have ruled on the proper interpretation of the law as applied to home video recording, this equipment, if used to record copyrighted material, should be operated at user's own risk.

WARNING:
TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.
This equipment should be used with DC 6V only.
CAUTION:
To prevent electric shocks and fire hazards, do not use any other power source.
The AC power adapter/battery charger should be used with:
AC120V; 60Hz in the USA and Canada, AC110/220/240V; 50/60Hz in other countries. (NTSC model)
AC110~240V; 50/60Hz. (PAL model)
CAUTION:
To prevent electric shocks and fire hazards, do not use any other power source.

X-RAY RADIATION

The primary source of X-ray radiation in this viewfinder is the picture tube. The tube used in this viewfinder is especially constructed to limit X-ray radiation emission. For continued X-ray radiation protection, the replacement tube must be the same type as the original. Mitsubishi approved one.

SAFETY NOTICE

Before returning VIDEO CAMERA/RECORDER to the customer a safety check of the entire VIDEO CAMERA/RECORDER should be made, The service technician must be sure that no protective device built into the instrument by the manufacturer has become defective or inadvertently damaged during servicing.
Observe all caution and safety related notes located on or inside the VIDEO CAMERA/RECORDER cabinet.
WARNING: Alterations of the design or circuitry of this VIDEO CAMERA/RECORDER should not be made.
Any design alterations or additions, such as circuit modifications, auxiliary speaker jacks, switches, grounding, active or passive circuitry, etc. use of unauthorized AC power adapter/charger, battery, cables, accessories, etc. may alter the safety characteristics of this VIDEO CAMERA/RECORDER and potentially create a hazardous situation for the user.
Any design alterations or unauthorized additions will invalidate the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting from them.
Do not lubricate any motors.
When reassembling the VIDEO CAMERA/RECORDER, always be certain that all the protective devices are put back in place, such as non-metallic control knobs, shield plate, etc.
When service is required, observe the original lead dress.
Components that indicate evidence of overheating or other electrical or mechanical damage should be replaced.

LEAKAGE CURRENT CHECK

Before returning the VIDEO CAMERA/RECORDER to the customer, it is recommended the leakage current be measured by the following methods.

1.Cold Check
With the AC plug removed from the AC source, place a jumper across the two AC plug prongs. Turn the AC switch on. Using an ohmmeter, connect one lead to the jumpered AC plug and touch the other lead to each exposed metal part(metal cabinet, screwheads, metal overlays, control shafts, etc.), particularly any exposed metal part having a return path to the chassis. Exposed metal parts having a return path to the chassis should have a minimum resistance reading of 1 megaohm. Any resistance below this value indicates an abnormality which requires corrective action. Exposed metal parts not having a return path to the chassis will indicate an open circuit.

2.Hot Check

The test sequence, with reference to the measuring circuit in Fig. 1 is as follows:

(1) With switch S1 open, the VIDEO CAMERA/RECORDER is to be connected to the measuring circuit. Immediately after connection, the leakage current is measured using both positions of switch S2 and with the switching devices in the VIDEO CAMERA/RECORDER in all of their operating positions.

(2) Switch S1 is then to be closed, energizing the VIDEO CAMERA/RECORDER, and immediately after closing the switch, the leakage current is to be measured using both positions of switch S2, and with the switching devices in the VIDEO CAMERA/RECORDER in all of their operating positions.

Current measurements of items (1) and (2) are to be repeated after the VIDEO CAMERA/RECORDER has reached thermal stabilization.

The leakage current shall not be more than 0.5 milliampere.

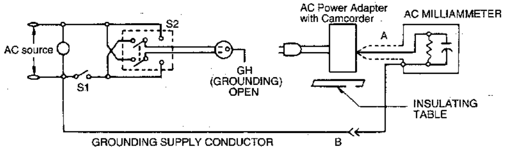


Fig. 1

AC Leakage Test

Avoid shock hazards. Do not connect this VIDEO CAMERA/RECORDER to a TV antenna, cable or accessory that exhibits excessive leakage currents. If available, the television instrument or cable to which this VIDEO CAMERA/RECORDER is connected should have the antenna cold check and the leakage current hot check performed.

PRECAUTIONS

Handling and storage

- Avoid using the VIDEO CAMERA/RECORDER in the following places:
  - extremely hot, cold or humid places,
  - dusty places,
  - near appliances generating strong magnetic fields,
  - places subject to vibration, and
  - poorly ventilated areas.
- Be careful of moisture condensation.
- If you pour a cold liquid into a glass, water vapor in the air will condense on the surface of the glass. This is called moisture condensation.
- Moisture condensation on the head drum, one of the most critical parts of the VIDEO CAMERA /RECORDER, will cause damage to the tape.
- Moisture in the air will condense on the VIDEO CAMERA/RECORDER when you move the unit from a cold place to a warm place, after heating a cold room or under extreme humidity conditions. Avoid using the VIDEO CAMERA/RECORDER under these conditions.
- Handle the VIDEO CAMERA/RECORDER carefully.
- Do not place anything heavy on the VIDEO CAMERA/RECORDER.
- In case of transportation:
  Avoid violent shocks to the VIDEO CAMERA/RECORDER during packing and transportation.
- Before packing, be sure to remove the cassette from the VIDEO CAMERA/RECORDER.

THIS SYMBOL INDICATES "FAST OPERATING FUSE".

Ce symbole indique un "fusible à fonctionnement rapide".

CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE 1.6A, 250V FUSE.

ATTENTION: Pour une protection permanente contre un risque d'incendie, ne remplacer qu'avec un fusible de 1.6A, 250V de même type.

CONNECTION

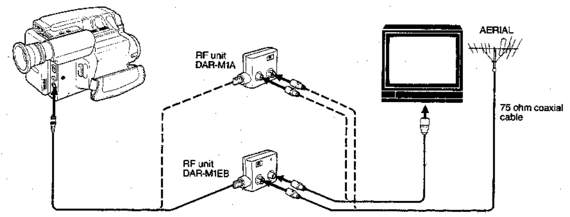
Connection to a TV without audio/video inputs

Disconnect the antenna cable from the back of the TV. Connect antenna cable to the RF IN terminal on the RF unit. If an antenna cable other than 75 ohm coaxial cable is to be use, install the matching transformer (300 ohm →75 ohm).

Connect one end of the coaxial cable to the RF OUT terminal on the RF unit.

Connect the other end of the coaxial cable to the ANTENNA IN terminal of the TV set. If no 75 ohm terminal is abailable on the TV set, a VHF/UHF splitter must be used.

Connect the RF unit cable to the AV OUT/EDIT terminal on the VIDEO CAMERA/RECORDER.



Connection to a TV with video/audio inputs

Connect the RCA type audio/video cable to the AV OUT/EDIT terminal on the VIDEO CAMERA/RECORDER. To do this, align the plug so that the arrow faces up and gently press it into place.

Connect the other side of the cable to the TV.

HS-CX1

AUDIO : To AUDIO IN terminal
VIDEO : To VIDEO IN terminal
EDIT : Do not connect

HS-CX4

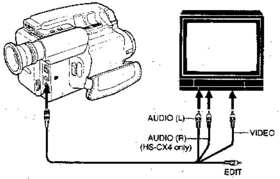
AUDIO(L) : To AUDIO(L) IN terminal
AUDIO(R) : To AUDIO(R) IN terminal
VIDEO : To VIDEO IN terminal
EDIT : Do not connect

Connection to a TV with EURO AV socket

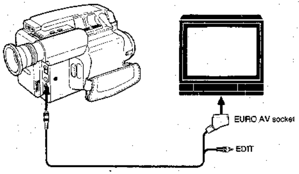
Connect the EURO AV cable to the AV OUT/EDIT terminal on the VIDEO CAMERA/RECORDER. To do this, align the plug so that the arrow faces up and gently press it into place.

Connect the other side of the cable to the EURO AV terminal on the TV.

TV WITH AUDIO AND VIDEO INPUTS



TV WITH EURO AV SOCKET



DISASSEMBLY

Note : All illustrations used in "Disassembly" are for HS-CX4.

Warning : Detach the FPC cable according to procedures indicated in this manual, or do not touch the exposed terminal of the connector directly because they can cause malfunction.
Open the connector for FPC cable in the order shown by the arrows in Fig. 1 to remove the connector.
(To connect the FPC cable reverse procedures of this disassembly.)

Note : FPC connectors, VE, PD, VD, VG, VS, JS, JT must be performed arrow ① in Fig. 1 only.

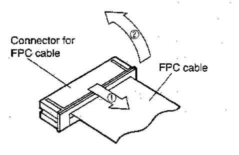


Fig. 1

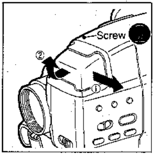
1. Case (Outer) Disassembling Procedure

Order	1 (possible in no order of these items)				2
Article name	Cassette housing	Microphone unit	Zoom switch	Tripod base	Case unit (L)
Symbol of removed No.	●	●	●	④	⑤
Screw & Terminal to be removed	Screws-2pcs.	Screw-1pc. Terminal-MN	Screw-1pc. Terminal-ZA	Screws-3pcs.	Screws-8pcs. Terminels-JS, JT

Order	3	4	5
Article name	Front panel unit	Case unit (R)	Chassis assembly & Camera assembly
Symbol of removed No.	⑥	●	⑧
Screw & Terminal to be removed	Screws-2pcs.	Screws-2pcs. Terminal-RP	Screws-2pcs. Terminals-CA, SB

Important :

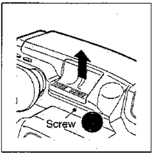
1. Removing Microphone unit



1. Remove the screw No. 2.
   (See figure above and the following page.)
2. Slide the Microphone unit to right slightly.
   Lift up the bottom of the microphone unit carefully.

Caution : Do not stretch the lead of connector MN in removing Microphone unit.

2. Removing Zoom switch

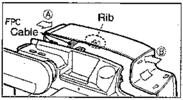


1. Remove the screw No. 3.
   (See figure above and the following page.)
2. Lift up carefully.

Caution : Do not stretch the lead of connector ZA in removing Microphone unit.

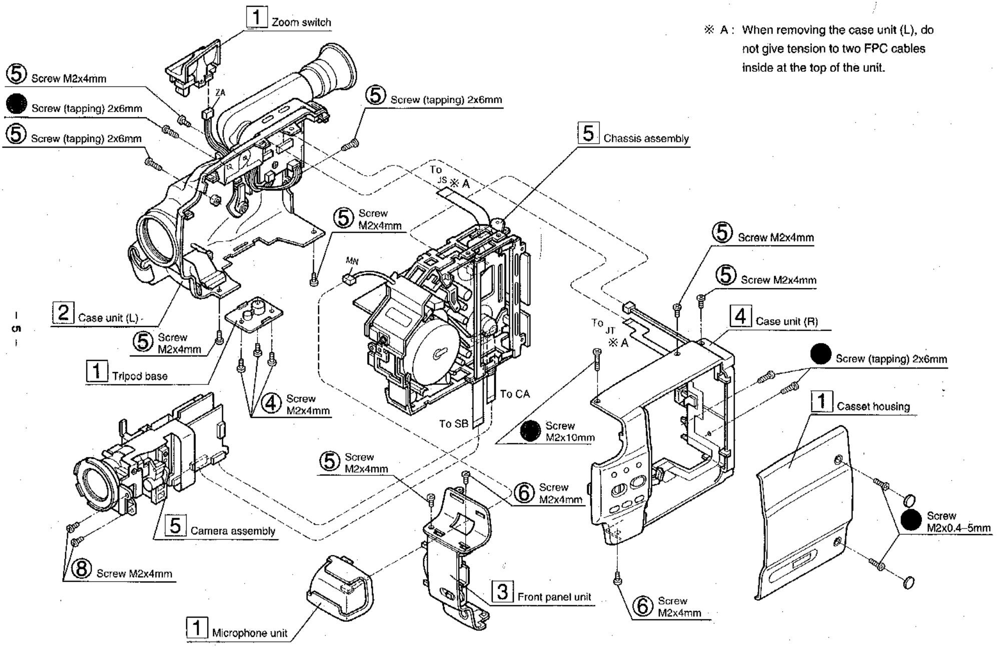
3. Removing Case unit

1. Remove the screw No. 5.
   (See figure above and the following page.)



2. Press points A and B as shown by the arrows in the above figure then carefully detach the rib.
3. Hold the Case unit (L) slightly away from the Case unit (R), and remove it from the bottom cast and then the top of the unit.

Caution : Do not apply tension to two the FPC cables inside of the unit at the top.


1 Zoom switch
ZA
⑤ Screw M2x4mm
● Screw (tapping) 2x6mm
⑤ Screw (tapping) 2x6mm
⑤ Screw (tapping) 2x6mm
5 Chassis assembly
To JS ※ A
⑤ Screw M2x4mm
MN
⑤ Screw M2x4mm
⑤ Screw M2x4mm
4 Case unit (R)
To JT ※ A
2 Case unit (L)
⑤ Screw M2x4mm
1 Tripod base
④ Screw M2x4mm
To CA
To SB
● Screw M2x10mm
● Screw (tapping) 2x6mm
1 Casset housing
⑤ Screw M2x4mm
⑥ Screw M2x4mm
5 Camera assembly
⑧ Screw M2x4mm
● Screw M2x0.4–5mm
3 Front panel unit
⑥ Screw M2x4mm
1 Microphone unit

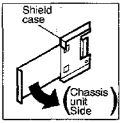
※ A : When removing the case unit (L), do not give tension to two FPC cables inside at the top of the unit.

2. Disassembling Chassis Unit

Order	1	2	3	4	5
Article name	VTR - SUB PCB ASSY	Shield case	Camera SW ASSY	VTR PCB ASSY	Rear PCB ASSY
Symbol of removed No.			●	❷	
Screw & Terminal to be removed	Terminals- PC, PD, PP, PQ		Screw-1pc. Terminal-VF	Screws - 6pcs. Terminals- VD, VE, VG, VL, VM	Terminal-RR

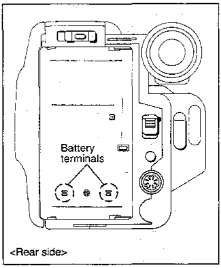
Important :

1. Attaching Shielded Case

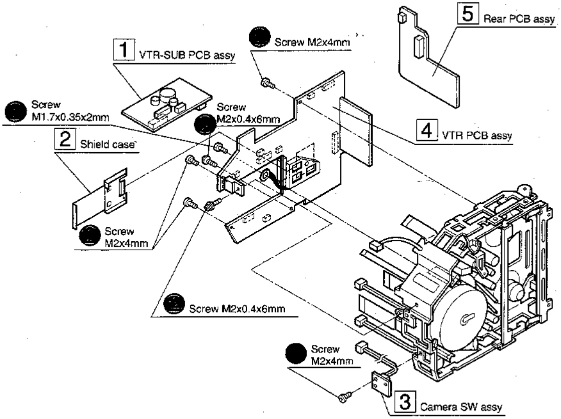


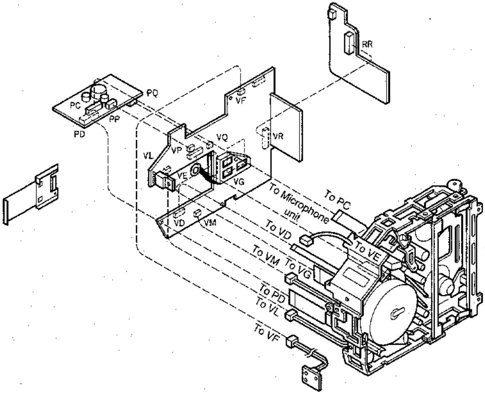
Press copper foil sheet to a direction shown by arrow in the figure to attach it the VTR PCB ASSY, avoid interfering with the FPC cable.

2. Attaching Chassis unit and Case unit (R)



Insert battery terminals on the Rear PCB Assy in the holes of the back panel of the Case unit (R) to fit the Chassis unit into the Case unit (R).


5 Rear PCB assy
Screw M2x4mm
1 VTR-SUB PCB assy
Screw M1.7x0.35x2mm
Screw M2x0.4x6mm
4 VTR PCB assy
2 Shield case
Screw M2x4mm
Screw M2x0.4x6mm
Screw M2x4mm
3 Camera SW assy


RR
PQ
VF
PC
PP
PD
VQ
VR
VL
VP
VE
VG
VD
VM
To Microphone unit
To PC
To VD
To VE
To VM
To VG
To PD
To VL
To VF

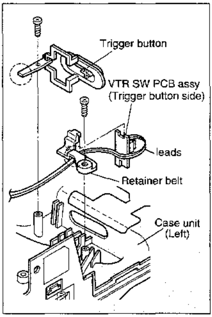
3. Disassembling Case unit (L)

Order	1	2	3	after 1	after 2
Article name	Retainer belt	VTR SW PCB assy	EVF unit	Grip belt	Trigger button
Symbol of removed No.	●	❷	❸		④
Screw & Terminal to be removed	Screw-1pc.	Screws-2pcs. Terminal-JB, JE	Screws-2pcs.		Screw-1pc.

Order	Possible in no order of these items
Article name	Back up battery holder
Symbol of removed No.	⑤
Screw & Terminal to be removed	Screws-2pcs. Terminal-JB

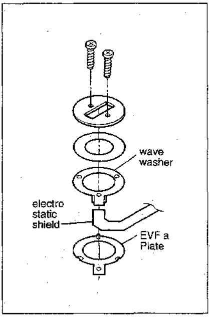
Important :

1. **Leads of VTR PCB ASSY (Trigger bottom side)**

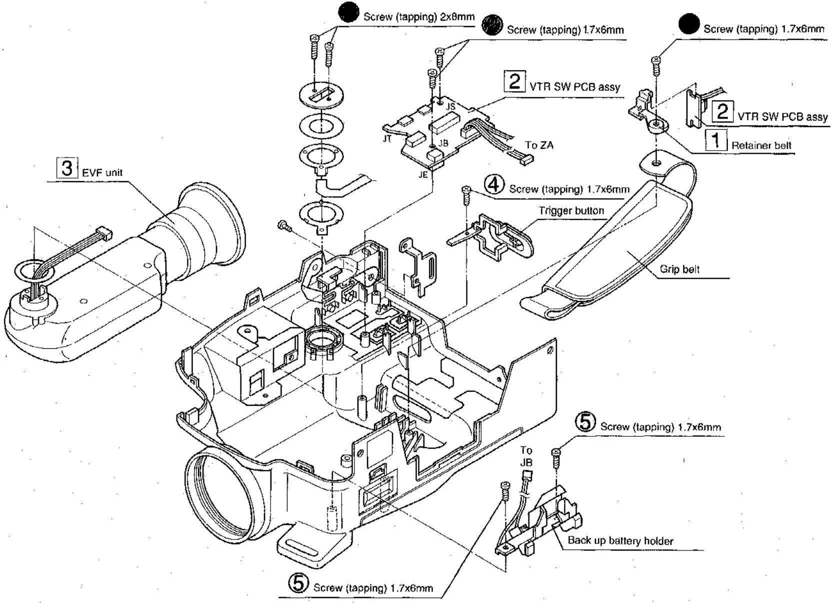

Trigger button
VTR SW PCB assy (Trigger button side)
leads
Retainer belt
Case unit (Left)

Put leads of VTR PCB ASSY (Trigger bottom side) between a rib of the trigger bottom and a retainer belt, and Case unit (L).

2. **Attaching EVF Unit**


wave washer
electro static shield
EVF a Plate

Attach the EVF unit while putting electrostatic shield taped on the Case unit (L) between a wave washer and EVF a plate.
The convex side of the wave washer and EVF plate must be toward the upper side.


● Screw (tapping) 2x8mm
Screw (tapping) 1.7x6mm
● Screw (tapping) 1.7x6mm
2 VTR SW PCB assy
2 VTR SW PCB assy
1 Retainer belt
JS
JT
JB
JE
To ZA
3 EVF unit
④ Screw (tapping) 1.7x6mm
Trigger button
Grip belt
⑤ Screw (tapping) 1.7x6mm
To JB
Back up battery holder
⑤ Screw (tapping) 1.7x6mm

4. Disassembling Power knob of the Case unit (R)

Order	1	2
Article name	Power SW PCB assy	Power knob
Symbol of removed No.	●	
Screw & Terminal to be removed	Screw-1pc.	

5. Disassembling Eject knob of the Case unit (R)

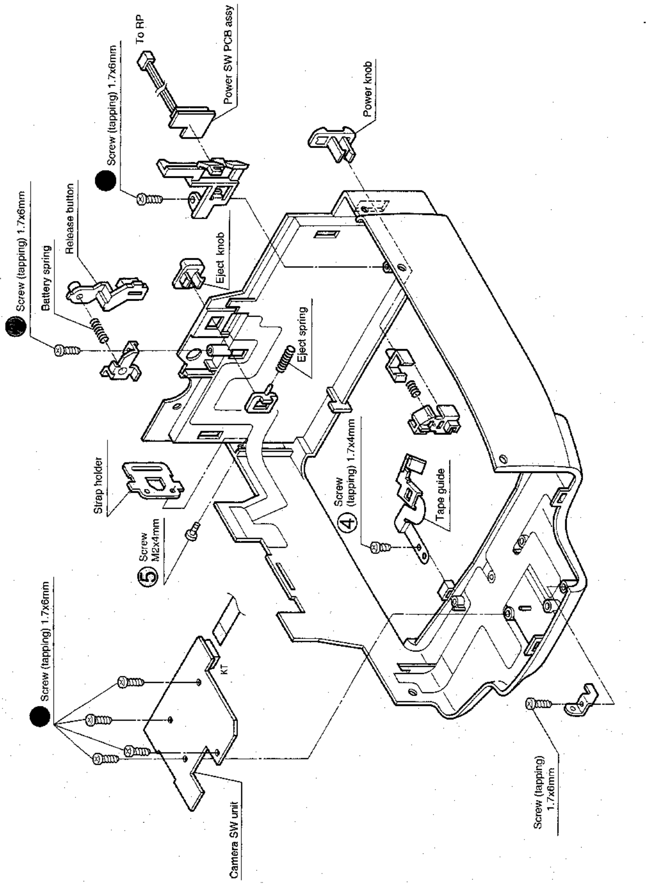
Order	1	2
Article name	Eject spring	Eject knob
Symbol of removed No.		
Screw & Terminal to be removed		

6. Disassembling Release button of the Case unit (R)

Order	1	2
Article name	Battery spring	Release button
Symbol of removed No.	●	
Screw & Terminal to be removed	Screw-1pc.	

7. Disassembling Other parts of the Case unit (R)

Order	Possible in no order of these items		
Article name	Camera SW unit	Tape guide	Strap holder
Symbol of removed No.	●	④	⑤
Screw & Terminal to be removed	Screws-4pcs. Terminal-KT	Screw-1pc.	Screw-1pc.


● Screw (tapping) 1.7x6mm
Screw (tapping) 1.7x6mm
Battery spring
Release button
Eject knob
● Screw (tapping) 1.7x6mm
To RP
Power SW PCB assy
Power knob
Eject spring
Strap holder
⑤ Screw M2x4mm
④ Screw (tapping) 1.7x4mm
Tape guide
KT
Camera SW unit
Screw (tapping) 1.7x6mm

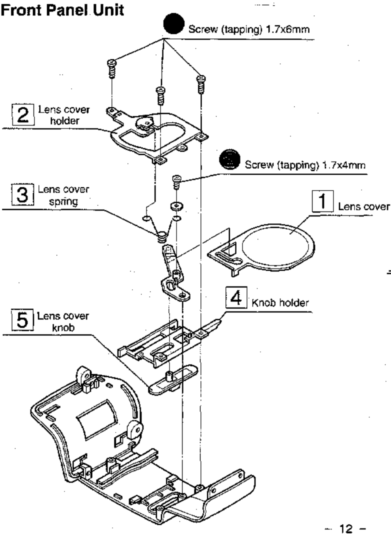
8. Disassembling Front Panel Unit

Order	1	2	3	4	5
Article name	Lens cover	Lens cover holder	Lens cover Spring	Knob holder	Lens cover knob
Symbol of removed No.		●	●		
Screw & Terminal to be removed		Screws - 3pcs.	Screw - 1pc.		

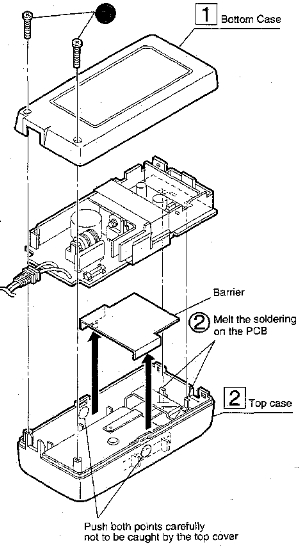
9. Disassembling AC Power Adapter

Order	1	2
Article name	Top cover	Bottom cover
Symbol of removed No.	●	②
Screw & Terminal to be removed	Screws - 2pcs.	Soldering - 2points. points

Front Panel Unit

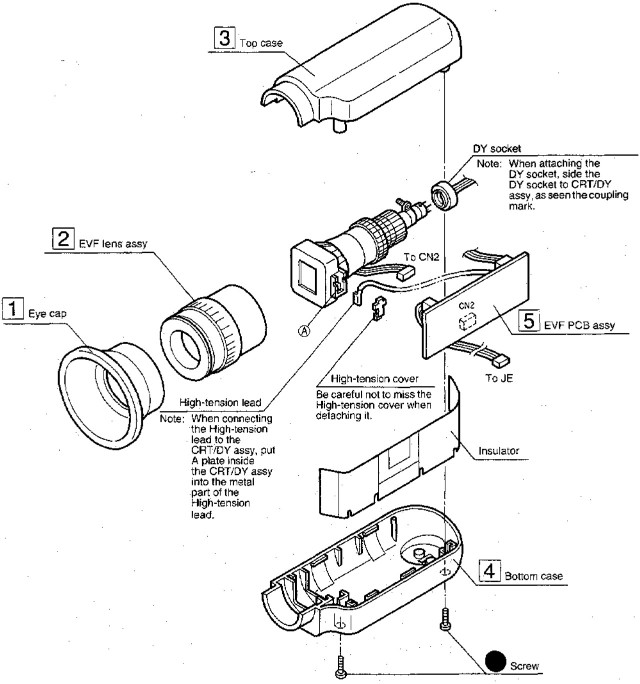

● Screw (tapping) 1.7x6mm
2 Lens cover holder
● Screw (tapping) 1.7x4mm
3 Lens cover spring
1 Lens cover
4 Knob holder
5 Lens cover knob

AC Power Adapter


●
1 Bottom Case
Barrier
② Melt the soldering on the PCB
2 Top case
Push both points carefully not to be caught by the top cover

10. Disassembling EVF Unit

Order	1	2	3	4	5
Article name	Eye cap	EVF lens assy	Top case	Bottom case	EVF PCB assy
Symbol of removed No.			●		
Screw & Terminal to be removed			Screws - 2pcs.		Terminal - High - tension lead, DY socket CN2


3 Top case
DY socket
2 EVF lens assy
To CN2
1 Eye cap
CN2
Ⓐ
5 EVF PCB assy
High-tension cover
To JE
High-tension lead
Insulator
4 Bottom case
● Screw

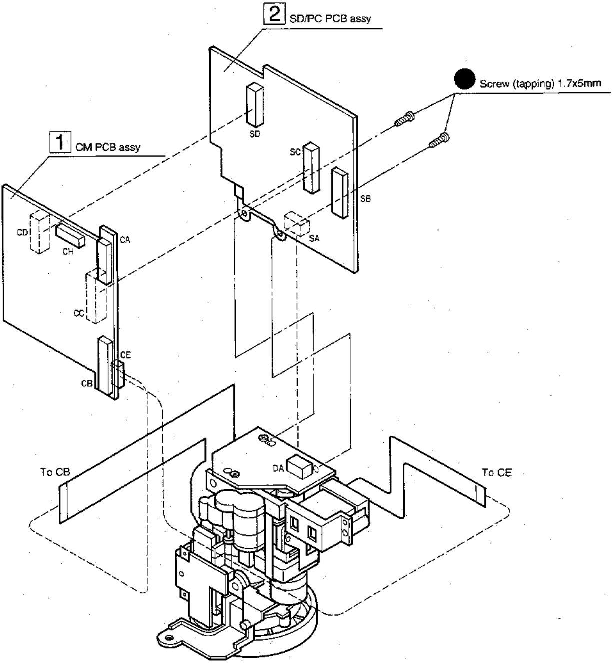
DY socket
Note: When attaching the DY socket, side the DY socket to CRT/DY assy, as seen the coupling mark.

High-tension cover
Be careful not to miss the High-tension cover when detaching it.

High-tension lead
Note: When connecting the High-tension lead to the CRT/DY assy, put A plate inside the CRT/DY assy into the metal part of the High-tension lead.

11. Disassembling Camera Unit

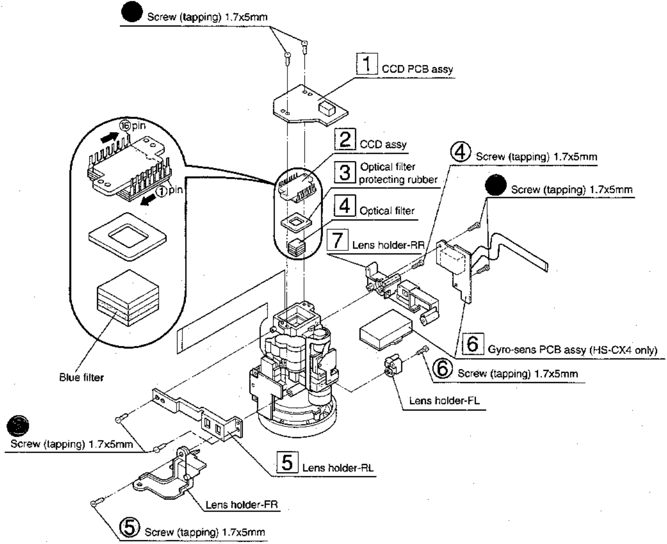
Order	1	2
Article name	CM PCB assy	SD/PC PCB assy
Symbol of removed No.		●
Screw & Terminal to be removed	Terminals- CB, CC, CD, CE	Screws-2pcs. Terminal-SA


2 SD/PC PCB assy
● Screw (tapping) 1.7x5mm
1 CM PCB assy
SD
SC
SB
SA
CD
CH
CA
CC
CE
CB
To CB
DA
To CE

12. Disassembling Lens Unit

Order	1	2	3	4	5
Article name	CCD PCB assy	CCD assy	Optical filter protecting rubber	Optical filter	Lens holder-RL
Symbol of removed No.	●				●
Screw & Terminal to be removed	Screws-2pcs.				Screws-2pcs.

Order	6	7	possible in no order of these items	
Article name	Gyro-sens PCB assy	Lens holder-RR	Lens holder-FR	Lens holder-FL
Symbol of removed No.	●	④	⑤	⑥
Screw & Terminal to be removed	Screws-2pcs.	Screw-1pc.	Screw-1pc.	Screw-1pc.


● Screw (tapping) 1.7x5mm
1 CCD PCB assy
⑯pin
①pin
2 CCD assy
3 Optical filter protecting rubber
4 Optical filter
7 Lens holder-RR
④ Screw (tapping) 1.7x5mm
● Screw (tapping) 1.7x5mm
Blue filter
6 Gyro-sens PCB assy (HS-CX4 only)
⑥ Screw (tapping) 1.7x5mm
Lens holder-FL
● Screw (tapping) 1.7x5mm
5 Lens holder-RL
Lens holder-FR
⑤ Screw (tapping) 1.7x5mm

Replacing CCD Image Sensor

Caution :
- As the CCD image sensor is a C-MOS type semi-conductor, the soldering iron must be grounded.
- Do not soil, stain or injure the transparent glass and optical filter of the CCD image sensor.
  If the CCD image sensor should be stained by finger print, wipe it off with silicone paper or chamois skin.
- When the CCD assy in soldered onto the PCB, do not apply excessive heat for a long time. The filter may be discolored by heat.

1. Removing

1. Take off the CCD PCB ASSY according to the disassembling procedures.
2. Remove sixteen terminals soldered on the CCD PCB ASSY to remove the CCD assy.

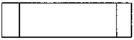
2. Attaching

Solder the CCD assy in the right direction on the CCD PCB ASSY.

TABLE OF EXTENSION JIGS

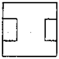
Extension Cable (FPC)

Connector	Parts No.
PD, PC, VS, to JS, VA to CA	859C543020
VD	859C543010
VG	859C543040
VE, VB to SB	859C543030



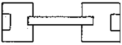
Joint Board

Connector	Parts No.
PD, PC	859C544020
VD	859C544010
VG	859C544040
VE	859C544030

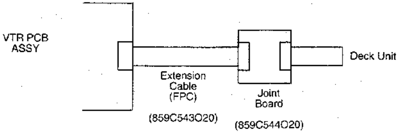


Board to Board

Connector	Parts No.
SD to CD	859C545020
SC to CC	859C545030
VQ to PQ, VP to PP	859C545010

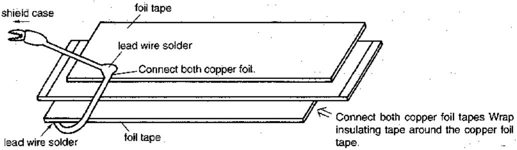


The following diagram illustrates how to connect the deck unit to the VTR PCB using the extension cable and Joint Board.


VTR PCB ASSY
Deck Unit
Extension Cable (FPC)
(859C543020)
Joint Board
(859C544020)

Processing Extension Cable (859C543040, used for VG connector)

1. Apply proper length of copper foil tape to both sides of the extension cable.
2. Connect a lead between both sides of the copper foil tape and solder it on the both sides.
3. Solder another lead with clip to one side. The lead must be connected (5 cm max). from the nearest edge of the extension cable.
4. Wrap insulating tape around the copper foil tape.


shield case
foil tape
lead wire solder
Connect both copper foil.
lead wire solder
foil tape
Connect both copper foil tapes Wrap insulating tape around the copper foil tape.

USING EXTENSION JIGS

Warning :
Use and apply a Regulated power source, 6V DC.

Camera Unit

1. Remove the Case unit (L) and the Front panel unit from the Camera unit.
2. Remove two fixed screws from the Camera unit.
3. Replace FPC cables between VB and SB, and VA and CA with extension jigs specified in table below to install the Camera unit. (See figure in the following page.)
4. Connect extension jigs specified in table below to connectors on the CM PCB and the SD/PC PCB, between connectors CD and SD, and CC and SC.

Note : Do not stretch FPC cables connected to connectors CB and CE excessively.

Extension Jigs :

Connector	Parts No.
VB to SB	859C543O30
VA to CA	859C543O20

Connector	Parts No.
CD to SD	859C545O20
CC to SC	859C545O30

2. VTR PCB ASSY

Warning:
Do not check the VTR PCB ASSY only removed from the Deck unit for over two hours.
If checking over two hours, attach a radiating plate to transistor Q5A2.
The transistor Q5A2 may be damaged if power on over two hours without a radiating plate.

1. Disassemble this VIDEO CAMERA/RECORDER according to disassembling procedures. Allocate each of the units or components. (See figure in the following page.)
2. Remove the Microphone unit and the Power switch from the Front panel switch to allocate them. (See figure in the following page.)
3. Connect the Deck unit to the VTR PCB ASSY with extension jigs shown in table below, connected to FPC cables.

Extension Jigs:

Connector	Parts No.
VG	859C543O40 , 859C544O40
VE	859C543O30 , 859C544O30
VD	859C543O10 , 859C544O10

Connector	Parts No.
PC	859C543O20 , 859C544O20
PD	859C543O20 , 859C544O20
VS-JS	859C543O20

Note : To minimize noise, wrap type No. 5 extension cable with copper foil sheet and connect it to a shielded case of the VTR PCB ASSY.

4. Connect the Deck unit to the shielded case with a lead, whose outer diameter of conductor is 0.76 mm min.
5. Connect each lead from the Loading motor and the Camera SW ASSY on the VTR PCB ASSY to connectors VL and VF on the Deck unit respectively.
6. Connect the VTR-SUB PCB ASSY to the VTR PCB ASSY with extension jigs shown in table below.

Extension Jigs:

Connector	Parts No.
VP to PP	859C545O10
VQ to PQ	859C545O10

Connector	Parts No.
PC	859C543O20 , 859C544O20
PD	859C543O20 , 859C544O20

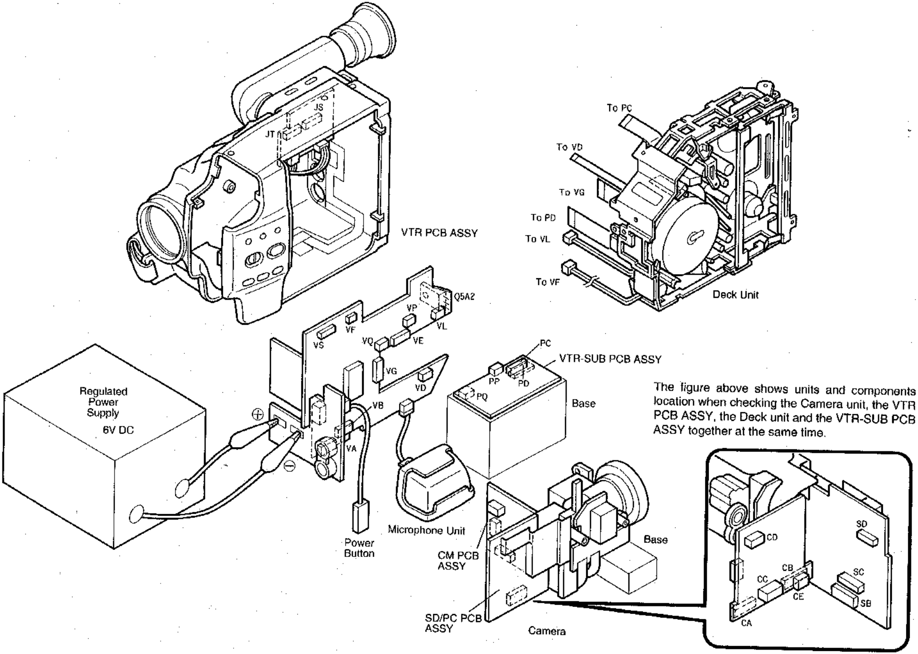
Note : Put the VTR-SUB PCB ASSY onto a insulated table without crossing any extension jigs and the FPC cable of the drum, as noise will occur in the signal of the drum.

Deck Unit

1. Perform items 1 and 2 of "Camera unit" above.
2. Perform items 2, 3, 4 and 5 of "VTR PCB ASSY" above.

VTR-SUB PCB ASSY

1. Perform items 1, 2 and 3 of "Camera unit" above.
2. Perform item 6 only of "VTR PCB ASSY" above.

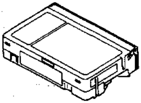
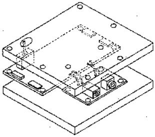
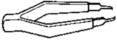

JS
JT
VTR PCB ASSY
To PC
To VD
To VG
To PD
To VL
To VF
Deck Unit
Q5A2
VP
VF
VL
VS
VQ
VE
PC
VTR-SUB PCB ASSY
VG
VD
PP
PD
PQ
Base
Regulated
Power
Supply
6V DC
⊕
⊖
VB
VA
Microphone Unit
Power
Button
CM PCB
ASSY
Base
SD/PC PCB
ASSY
Camera
CD
SD
CB
CC
SC
CE
SB
CA

The figure above shows units and components location when checking the Camera unit, the VTR PCB ASSY, the Deck unit and the VTR-SUB PCB ASSY together at the same time.

Adjusting VCR Unit Circuit

1. Jigs and Measuring Instruments

1-1 Jigs

Alignment Tape	Video Signal Input Jig	Pincers for Mini-connectors
See NOTE 1	859C398O70	859C395O30
		

NOTE 1

PC1KC (N-VHS Colour Bar)	:859C397O70
PC1KCS (S-VHS Colour Bar)	:859C397O80
PM6KE2CS (N-VHS 2H Monoscope)	:859C397O60
PM3KE6(CH1)C (N-VHS 6H Monoscope)	:859C399O40
PMXC (N-VHS 2H Monoscope)	:859C399O50

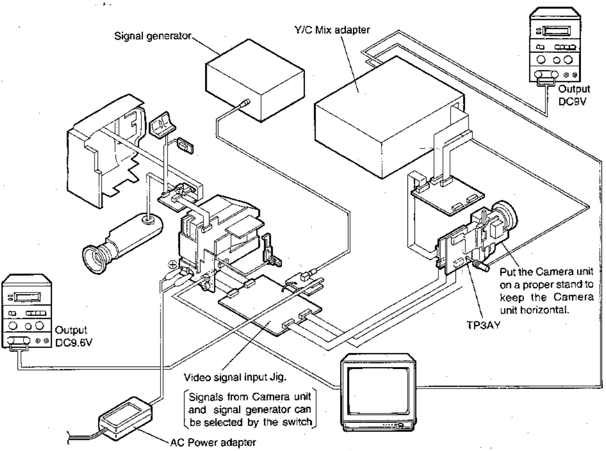
1-2 Tools and Measuring Instruments

1. Colour monitor (Colour TV: Use a monitor having two or more video input terminals.)
2. Oscilloscope
3. Colour bar generator
4. Frequency counter
5. Full set of general electric tools
6. Audio generator
7. Digital voltmeter
8. Carrier checker
9. Small screwdriver
10. Vector scope
11. Y/C Mix Adapter (859C398O90)

2. Precaution

VCR unit circuit often needs adjustment after replacing mechanical parts or the video heads.
If the electrical circuit is defective, locate the defective part using some appropriate instruments and repair or replace, and then adjust it.
Do not fiddle with any controls without verifying the cause of trouble.
Do not perform all adjustments, only adjust those pertaining to a specific problem.
When recording or playing, connect EVF to input V-SYNC to JE connector.

3. Standard Location and Connection

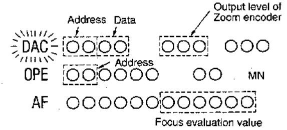

Signal generator
Y/C Mix adapter
Output
DC9V
TP3AY
Output
DC9.6V
Video signal input Jig.
AC Power adapter

Put the Camera unit on a proper stand to keep the Camera unit horizontal.

(Signals from Camera unit and signal generator can be selected by the switch)

Note: Use the video signal input tool for inputting video signal.

4. Adjusting electronic volume withY/C Mix adapter


Output level of
Zoom encoder
Address
Data
DAC
OO OO
OOO OOO
Address
OPE
OO OOOO
OO
MN
AF
OOOOOO OOOOOO
Focus evaluation value

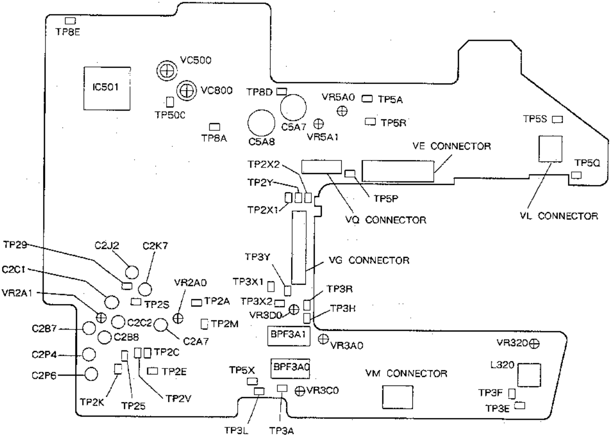
- Electronic volume adjustment requires connection of the Y/C Mix adapter.
- When displaying video output signal on a monitor, watch the display, shown in left figure, at the bottom on the screen.
You should adjust electronic volume, watching this display on the screen.

4-1 Adjusting DAC Address

1. Turn EEPROM switch to WRITE side.
2. Press OPE•DAC button to blink "DAC" display.
3. Two-digit hexadecimal numbers displayed to the right of the "DAC" display shows the current address of DAC.
When changing address number, press ADDRESS switch to (+) or (–) side once so that the number of address increases ±1, or keep pressing for continual change.
4. Two-digit hexadecimal numbers displayed to the right of the numbers of DAC address shows the content (data) of the current DAC address.
When changing data of address, DATA switch to (+) or (–) side once so that the number of data increases 1, or keep pressing for continual change.
5. Press ADDRESS switch to (+) or (–) side to write the data to EEPROM.

Location of Adjustment Points (VCR Section)

PCB VTR (COMPONENT SIDE)


TP8E
IC501
VC500
VC800
TP50C
TP8D
VR5A0
TP5A
TP8A
C5A8
C5A7
VR5A1
TP5R
TP5S
VE CONNECTOR
TP5Q
TP2X2
TP2Y
TP2X1
TP5P
VQ CONNECTOR
VL CONNECTOR
TP29
C2C1
VR2A1
C2J2
C2K7
TP3Y
VG CONNECTOR
VR2A0
TP3X1
TP3R
TP2S
TP2A
TP3X2
TP3H
C2B7
C2C2
VR3D0
TP2M
C2B8
C2A7
BPF3A1
VR3A0
VR320
C2P4
TP2C
L320
C2P6
TP2E
TP5X
BPF3A0
VM CONNECTOR
VR3C0
TP3F
TP2K
TP25
TP2V
TP3E
TP3L
TP3A

Note: Unless otherwise instructed, ground the head amp to the shield case.

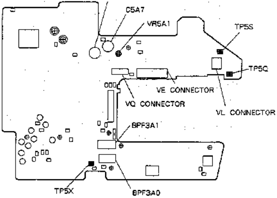
[Power Supply Circuit] 1. Power Supply Voltage	**Adjustment purpose:** Setting power supply voltage of VCR and camera. **Symptom when incorrectly adjusted:** Malfunction.

Measuring instrument and condition		VCR set up condition	
D.V.M		Input signal	Video signal (of camera out)
Test point	Positive : TP5Q Negative : TP5S	Using tape	A tape (VHS)
EXT trigger	—	VCR condition	SP REC (VHS)
Measurement range	—	Using jig.	—

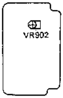
Warning : Turn VR5A1 and VR902 to the mechanical centre point and power on.

1. Adjust VR5A1 so that the D.V.M is at 5.00±0.03V.
2. Connect the positive of D.V.M to TP5X.
3. Adjust VR902 so that the D.V.M is at 8.50 ±0.03 V.

PCB VTR


C5A8
C5A7
VR5A1
TP5S
TP5Q
VE CONNECTOR
VQ CONNECTOR
VL CONNECTOR
BPF3A1
TP5X
BPF3A0

PCB VTR-SUB



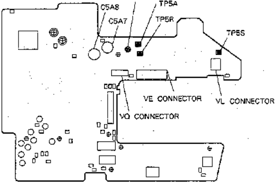
[Servo Circuit] 2. Playback Switching Point	**Adjustment purpose:** Video Head switch timing during playback. **Symptom when incorrectly adjusted:** Switching noise or jitter on the picture during playback.

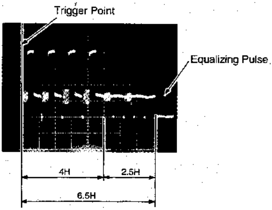
Measuring instrument and condition		VCR set up condition	
Oscilloscope (Probe 10:1)		Input signal	—
Test point	AV OUT terminal (Video out)	Using tape	VHS Alignment tape (Colour bar)
EXT trigger	TP5A	VCR condition	SP REC
Measurement range	DIV : 20 mV TIM : 50 µs	Using jig.	—

1. Connect TP5R to TP5S.
2. Set the oscilloscope's slope to (–).
3. Adjust VR5A0 so that the trigger point is located at 6.5 ± 1.0 H before the vertical synchronizing signal.

Note: To recover digital tracking disconnect TR5R from TP5S and then turn off power.

PCB VTR


VR5A0
C5A8
TP5A
C5A7
TP5R
TP5S
VE CONNECTOR
VL CONNECTOR
VQ CONNECTOR



[Y/C Signal Circuit]
3. L.P.F Cut-Off Frequency

Adjustment purpose: Bandwidth of Low Pass Filter frequency to reject unnecessary signal during REC or PB.

Symptom when incorrectly adjusted: Soft picture or poor S/N.

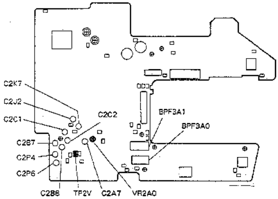
Measuring instrument and condition	
Oscilloscope (Probe 10:1)	
Test point	CH-1 : TP2V CH-2 : —
EXT trigger	—
Measurement range	DIV : 10mV TIM : Variable

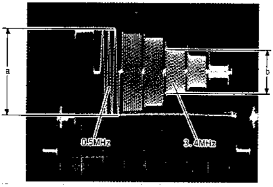
VCR set up condition	
Input signal	Multiple burst
Using tape	A tape (VHS)
VCR condition	LP REC
Using jig.	—

1. Input Mulitiburst signal.
2. When mulitiburst signal amplitude at 0.5MHz is "a" and "b" at 3.4MHz, adjust VR2A5 for b/a = 0.5, as shown below.

Note: Some signal generator cannot provide correct 3.4MHz signal.
Signal at 3.4 ± 0.3MHz may be permitted.
For location of the 3.4MHz signal, refer to the operation manual.

PCB VTR





4. Signal Level

Adjustment purpose: Input level of emphasizer during recording in VHS mode.

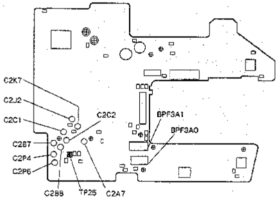
Symptom when incorrectly adjusted: Poor sharpness of picture, white or black streaking.

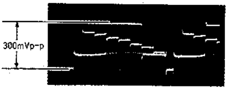
Measuring instrument and condition	
Oscilloscope (Probe 10:1)	
Test point	CH-1 : TP25 CH-2 : —
EXT trigger	—
Measurement range	DIV : 10 mV TIM : 10 µs

VCR set up condition	
Input signal	Split field stair step
Using tape	A tape (VHS)
VCR condition	LP REC
Using jig.	—

1. Set DAC address to 1F.
2. Adjust data of DAC address (1F) so that the amplitude of oscilloscope's waveform is 300 mVp-p.

PCB VTR



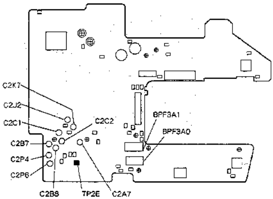


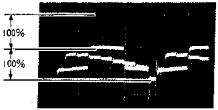
5. White Clip	**Adjustment purpose:** Improve picture sharpness. **Symptom when incorrectly adjusted:** Poor sharpness of picture, white or black streaking.

Measuring instrument and condition		VCR set up condition	
Oscilloscope (Probe 10:1)		Input signal	Split field stair step
Test point	CH-1 : TP2E CH-2 : —	Using tape	A tape (VHS)
EXT trigger	—	VCR condition	LP REC
Measurement range	DIV : 10 mV (Variable) TIM : 10 µs	Using jig.	—

1. Set DAC address to 20.
2. Adjust data of DAC address (20) so that overshoot of first transition in 100 % white area is 100%, where range from sync tip to white peak is assumed as 100 %.

PCB VTR

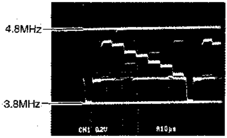

C2K7
C2J2
C2C1
C2B7
C2P4
C2P6
C2B8
TP2E
C2A7
C2C2
BPF3A1
BPF3A0



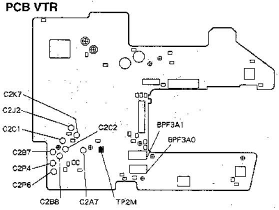
6. Carrier Set, Deviation	**Adjustment purpose:** FM carrier frequency and frequency deviation. **Symptom when incorrectly adjusted:** Too bright or too dark picture. Poor colour bar display, horizontal noise or out of sync.

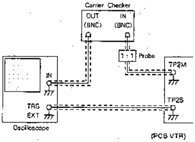
Measuring instrument and condition		VCR set up condition	
Oscilloscope (Probe 1:1)		Input signal	Split field stair step
Test point	CH-1 : TP2M CH-2 : —	Using tape	A tape (VHS)
EXT trigger	TP2S	VCR condition	LP REC
Measurement range	DIV : 0.2 V TIM : 10 µs	Using jig.	Carrier checker

1. Observe TP2M via carrier checker.
2. Set DAC address to 25.
3. Adjust data of DAC address (25) so that frequency of sync tip is 3.8 MHz.
4. Set DAC address to 1D.
5. Adjust data of DAC address (1D) so that frequency of white peak is 4.8 MHz.



PCB VTR


C2K7
C2J2
C2C1
C2B7
C2P4
C2P6
C2B8
C2A7
TP2M
C2C2
BPF3A1
BPF3A0


Carrier Checker
OUT (BNC)
IN (BNC)
1 : 1 Probe
TP2M
TP2S
IN
TRG EXT
Oscilloscope
(PCB VTR)

7. Chrominance Signal Recording Level	**Adjustment purpose:** Chrominance signal level during recording. **Symptom when incorrectly adjusted:** Colour impurity or flicker of colour bars.

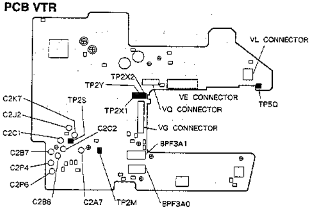
Measuring instrument and condition	
Oscilloscope (Probe 10:1)	
Test point	CH-1 : TP2Y (GND : TP2X2)
EXT trigger	TP2S
Measurement range	DIV : 5 mV TIM : 2 μs

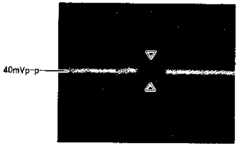
VCR set up condition	
Input signal	Video signal (of camera out)
Using tape	A tape (VHS)
VCR condition	LP REC
Using jig.	—

*This adjustment must be performed after finishing adjustments of all chroma signal processing circuit of the camera unit.

1. Connect TP2M to TP5Q.
2. Connect TP2X1 to TP2X2 via a capacitor (0.1μF).
3. Shade the camera's lens.
4. Set DAC address to 1C.
5. Adjust data of DAC address (1C) so that the minimum amplitude of burst is 40 mVp-p.

PCB VTR


VL CONNECTOR
TP2X2
TP2Y
C2K7
TP2S
TP2X1
VE CONNECTOR
VQ CONNECTOR
TP5Q
C2J2
C2C1
C2C2
VG CONNECTOR
BPF3A1
C2B7
C2P4
C2P6
C2B8
C2A7
TP2M
BPF3A0



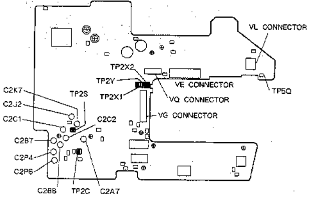
8. Luminance Signal Recording Level	**Adjustment purpose:** Luminance signal level during recording. **Symptom when incorrectly adjusted:** Lower luminance S/N or beat pattern.

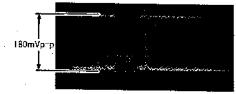
Measuring instrument and condition	
Oscilloscope (Probe 10:1)	
Test point	CH-1 : TP2Y (GND : TP2X2)
EXT trigger	TP2S
Measurement range	DIV : 5 mV TIM : 2 μs

VCR set up condition	
Input signal	Split field stair step
Using tape	A tape (VHS)
VCR condition	LP REC
Using jig.	—

1. Connect TP2C to TP5Q through a resistance (1kΩ).
2. Connect TP2X1 to TP2X2 via a capacitor (0.1μF).
3. Set DAC address to 21.
4. Adjust data of DAC address (21) so that the amplitude of horizontal sync is 180 mVp-p.

PCB VTR

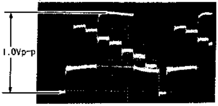

VL CONNECTOR
TP2X2
TP2Y
VE CONNECTOR
C2K7
TP2S
TP2X1
TP5Q
C2J2
VQ CONNECTOR
C2C1
VG CONNECTOR
C2C2
C2B7
C2P4
C2P6
C2B8
TP2C
C2A7



9. VHS Playback Level	**Adjustment purpose:** Video output level during playback . **Symptom when incorrectly adjusted:** Poor colour bar display.

Measuring instrument and condition		VCR set up condition	
Oscilloscope (Probe 10:1)		Input signal	—
Test point	CH-1 : VIDEO OUT terminal CH-2 : —	Using tape	VHS Alignment tape (colour bar)
EXT trigger	—	VCR condition	SP Playback
Measurement range	DIV : 20 mV TIM : 10 µs	Using jig.	—

1. Terminate the video signal output terminal at 75Ω.
2. Set DAC address to 24.
3. Adjust data of DAC address (24) so that the amplitude of waveform is 1.0Vp-p.

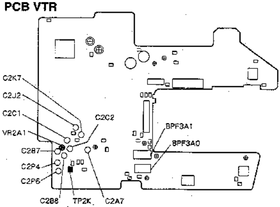


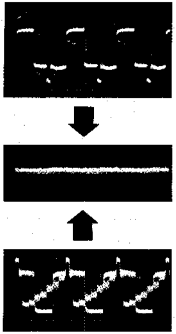
10. CCD Level	**Adjustment purpose:** Setting gain of Noise reduction circuit. **Symptom when incorrectly adjusted:** Lower video signal S/N.

Measuring instrument and condition		VCR set up condition	
Oscilloscope (Probe 10:1)		Input signal	—
Test point	CH-1 : TP2K CH-2 : —	Using tape	VHS alignment tape (colour bar)
EXT trigger	—	VCR condition	SP Playback
Measurement range	DIV : 10 mV TIM : 20 µs	Using jig.	—

1. Adjust VR2A1 so that the amplitude of waveform is the minimum.

PCB VTR





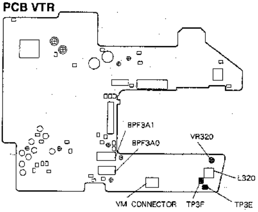
[Normal Audio Circuit] 11. Audio Bias Level	**Adjustment purpose:** Audio bias level during recording. **Symptom when incorrectly adjusted:** Poor audio response in high frequency area.

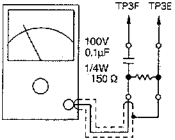
Measuring instrument and condition		VCR set up condition	
Audio Tester		Input signal	Stair step
Test point	TP3E TP3F	Using tape	A tape (VHS)
EXT trigger	—	VCR condition	SP REC
Measurement range	—	Using jig.	High pass filter

1. Connect an electrolytic capacitor (16 V min./10 µF) between pin Nos. 1 and 3, and Nos. 2 and 3 of VM connector so that pin No. 3 is negative.
2. Observe TP3E and TP3F with high pass filter.
3. Confirm no influence on precision of the audio tester from monitors or TV set, and adjust VR320 so that the audio tester is at 2.4 mVrms.

Warnings : Do not contact the audio tester with a VCR. Never play a tape when the audio tester is connected to the VCR. (The audio amplifier will be overloaded.)

PCB VTR



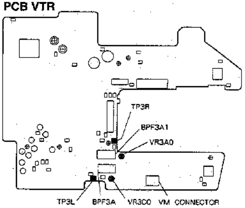


[Hi-Fi Audio Circuit] 12. Oscillating Frequency (HS-CX4 only)	**Adjustment purpose:** Setting FM carrier frequency of Hi-Fi audio signal. **Symptom when incorrectly adjusted:** Buzz noise.

Measuring instrument and condition		VCR set up condition	
Frequency counter		Input signal	Stair step
Test point	TP3L TP3R	Using tape	A tape (VHS)
EXT trigger	—	VCR condition	SP REC
Measurement range	—	Using jig.	—

1. Connect an electrolytic capacitor (16 V min./10 µF) between pin Nos. 1 and 3, and Nos. 2 and 3 of VM connector so that pin No. 3 is negative.
2. Adjust VR3C0 so that frequency of TP3L is 1.400 MHz ± 3.0 kHz.
3. Adjust VR3A0 so that frequency of TP3R is 1.800 MHz ± 3.0 kHz.

PCB VTR



13. FM Recording Level
(HS-CX4 only)

Adjustment purpose: Hi-Fi audio signal level during recording.

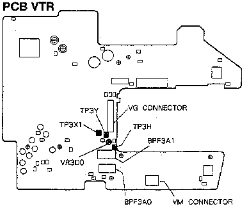
Symptom when incorrectly adjusted: Wow and flutter in audio signal or lower S/N in video signal.

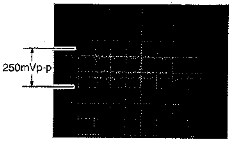
Measuring instrument and condition		VCR set up condition	
Oscilloscope (Probe 10:1)		Input signal	Stair step
Test point	CH-1 : TP3Y CH-2 : —	Using tape	A tape (VHS)
EXT trigger	TP3H	VCR condition	LP REC
Measurement range	DIV : 10 mV TIM : 50 μs	Using jig.	—

1. Connect an electrolytic capacitor (16 V min./10 μF) between pin Nos. 1 and 3, and Nos. 2 and 3 of VM connector so that pin No. 3 is negative.
2. Connect ground of probe to TP3X1 through capacitor (0.1 μF).
3. Adjust VR3D0 so that the amplitude of waveform is 250 mVp-p.

Note: The earth of trigger must be connected to ground.

PCB VTR





[Character display circuit]
14. PLL
(HS-CX4 only)

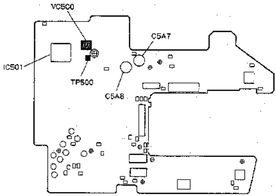
Adjustment purpose: Reference clock level of character display circuit.

Symptom when incorrectly adjusted: Character will flow in picture.

Measuring instrument and condition		VCR set up condition	
D.V.M		Input signal	Video signal (of camera out)
Test point	TP500	Using tape	—
EXT trigger	—	VCR condition	Stop
Measurement range	—	Using jig.	—

1. Adjust VC500 so that the voltage is 2.0 ± 0.1 V DC.

PCB VTR



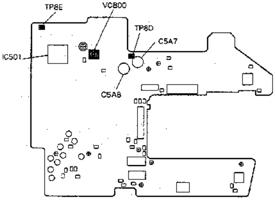
15. Character Display Position	**Adjustment purpose:** Location of character display position. **Symptom when incorrectly adjusted:** Characters will not be displayed in the regular position.

Measuring instrument and condition		VCR set up condition	
—		Input signal	Centre cross signal
Test point	—	Using tape	—
EXT trigger	—	VCR condition	Stop
Measurement range	—	Using jig.	—

Caution : In this adjustment, the view finder must be connected to JE connector.

1. Short TP8D and TP8E to display one vertical line in the picture.
2. Adjust VC800 so that the vertical line lies on the centre line of centre cross signal.

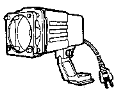
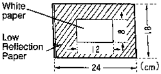
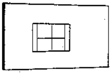
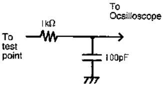
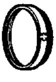
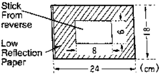
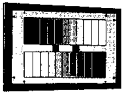
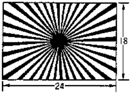
PCB VTR



Adjusting Camera Unit

1. Jigs and Measuring Instruments

1-1 Jigs

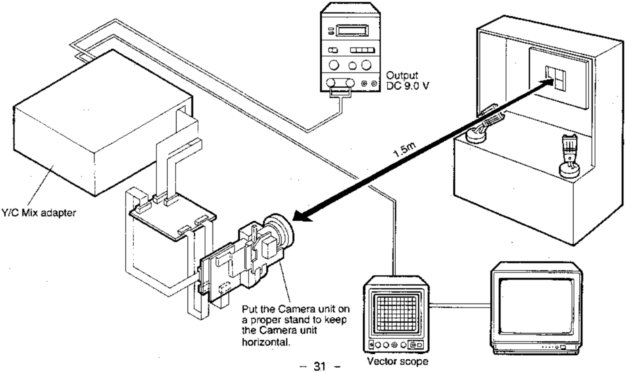
Halogen Light VLT-100 (3200 ± 50°K)	Window Chart (self-prepared)	Colour Chart (Reflection type) 859C39704	Low Pass Filter (self-prepared)
	 White paper Low Reflection Paper 8 18 12 24 (cm) Stick black paper on a square corrugated board and white paper, 12(W)x8(H) cm, at the centre on the black paper.		 To Ocsilloscope 1kΩ To test point 100pF
Conversion Filter for Colour Temperature and Extinction filter (1/100)	J Chart (self-prepared)	Gray Scale Chart 859C361010	Radial Chart (self-prepared)
 C2 (859C361080) C12 (859C361070) ND2 (859C362040)	 Stick From reverse Low Reflection Paper 6 18 8 24 (cm) Make holes at the size of 8(W)x6(H) cm on both a board and black paper and stick white paper from the reverse.		 Narrower width between lines better.

Note : Halogen light VLT-100 specified colour temperature at 3200°K available in adjustment.

1-2 Measuring Instruments

- Oscilloscope
- Vectorscope
- Illuminometer
- Digital voltmeter
- Colour monitor

2. Standard Location and Connection


Output DC 9.0 V
1.5m
Y/C Mix adapter
Vector scope

Put the Camera unit on a proper stand to keep the Camera unit horizontal.

3. Preparation and Check Items

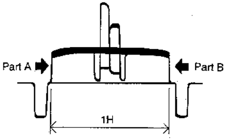
3-1 Preparation and Caution

1. You must use lamps with colour temperature at 3200°K to illuminate a chart used in adjustment, and set the lamps so that luminance on the surface of the chart is kept at about 2,000 lx. Install the illuminaires so that the chart is illuminated evenly (two or more light sources are preferable). If luminance on the surface of the chart is uneven, you cannot perform this adjustment properly.
2. When adjusting the Camera unit, you must adjust it without using any extension cable (without separating any unit of the VIDEO CAMERA/RECORDER), except where it's required.
3. Unless otherwise indicated in particular, distance between an object and the Camera unit is 1.5 m.

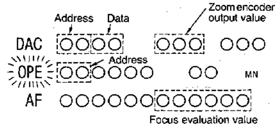
3-2 Adjusting Standard Angle of View

When shooting a chart in adjusting the Camera unit, unless otherwise indicated, shoot and adjust at the standard angle of view.

1. Shoot the Colour chart.
2. Connect the probe of oscilloscope to TP3AY or a video output terminal of the Y/C Mix adapter. Observe the waveform as shown right on the screen of oscilloscope.
3. Adjust the Power zoom button so that part A to B in the waveform are same as full effective range of horizontal signal.



3-3 Adjusting White Balance with Y/C Mix Adapter



White balance has three modes : "Auto" (OPE address is "00"), "Outdoor" ("01"), "Indoor" ("02"). OPE address is two-digit hexadecimal numbers to right of "OPE" on the screen.

1. Press OPE•DAC button to blink "OPE" display.
2. Press DATA switch to (+) side so that OPE address is 02 (Indoor) and again 00.
3. Press DATA switch to (–) side so that OPE address is 01 (Outdoor) and again 00.

Note : When changing mode from Indoor to Outdoor or the reverse, the OPE address must be changed via "00". If OPE address is changed directly, for example, "01" to "02", the mode never be selected properly.

3-4 Standard Condition

1. Unless otherwise indicated in particular, set each function mode of the Camera unit in table listed below in adjustment.

Shutter	Standard (1/50 s)
Focus	Manual
Special effects	Off
Backlight compensation	Off
White balance	Indoor(3,200°K)

Press reset button of Y/C Mix adapter to set each mode of shutter, special effects, backlight compensation as shown in table above. Setting white balance mode as referred to item 3-3 above.

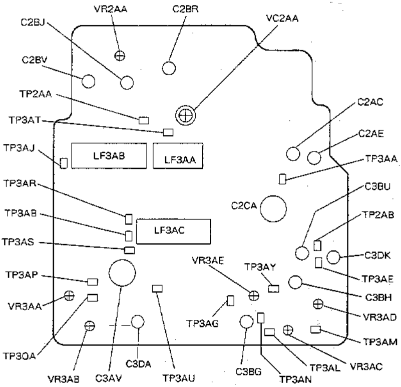
4. Adjusting Procedure for Camera Unit

The following shows all procedures to adjust each volume of the Camera unit.
You should perform some adjustment item(s) necessary for a trouble, not all.

1. 19 MHz Frequency
2. Zoom Encoder and Photo Sensor
3. Substrate voltage and Reset Voltage
4. OB Offset
5. ALC
6. CCD Gain
7. Setup Level
8. APL
9. Aperture Correction
10. Chroma Gamma Leak
11. R-Y and B-Y Offsets
12. Chroma Offset and $f_H/2$ Offset
13. White Balance
14. Amplifier Output of Iris Hole Element
15. Fsc
16. Chroma VCO
17. Chroma R-Y and B-Y Offset, and Burst Signal
18. Camera APL
19. Gain of R-Y and B-Y Chroma hue

Location of Adjustment Points (Camera section)

PCB SD/PC (COMPONENT SIDE)


VR2AA
C2BR
C2BJ
VC2AA
C2BV
TP2AA
C2AC
TP3AT
C2AE
TP3AJ
LF3AB
LF3AA
TP3AA
TP3AR
C3BU
C2CA
TP3AB
TP2AB
LF3AC
TP3AS
C3DK
VR3AE
TP3AY
TP3AE
TP3AP
C3BH
VR3AA
VR3AD
TP3AG
TP3AM
TP3OA
C3DA
TP3AL
VR3AC
VR3AB
C3AV
TP3AU
C3BG
TP3AN

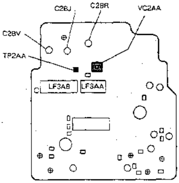
Note: Unless otherwise instructed, ground the shield case.

1. 19 MHz Frequency	**Adjustment purpose:** Reference oscillator frequency for timing of CCD drive. **Symptom when incorrectly adjusted:** Disturbance of picture and colour content screen.

Measuring instrument and condition	Frequency counter
Test point	TP2AA
EXT trigger	—
Measurement range	—
Chart used	—

1. Adjust VC2AA so that frequency of TP2AA is 19.3125MHz ± 60Hz.

PCB SD/PC



2. Zoom Encoder and Photo Sensor	**Adjustment purpose:** Back focus of lens **Symptom when incorrectly adjusted:** Out of focus in zooming

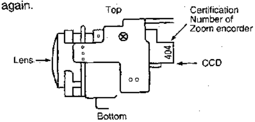
Measuring instrument and condition	—
Test point	—
EXT trigger	—
Measurement range	—
Chart used	Radial chart (or similar)

Certification Number	Movement	Certification Number	Movement
396	203	410	210
397	203	411	210
398	204	412	211
399	204	413	211
400	205	414	212
401	205	415	212
402	206	416	213
403	206		
404	207		
405	207		
406	208		
407	208		
408	209		
409	209		

1. Locate and shoot the radial chart at a distance of 10 m min. from the Camera unit.
2. Set DAC address to 32.
3. Press a zoom button of Y/C Mix adapter to set zoom encoder output value to 232, where the zoom is at wide angle. (Refer to Page 32 Item 3-3)
4. Set the focus to the best point with view and focus evaluation value, pressing manual button of Y/C Mix adapter. (The best focusing point is obtained where focusing is evaluated at the highest.)
5. Press the zoom button for telephoto. Set the focus to the best point close to telephoto max. with view and focus evaluation value, when read the zoom encoder output value. (This zoom encoder output value is called "V".)
6. Press TELE END button of Y/C Mix adapter to write data in EEPROM.
7. Press the zoom button for wide angle. Set the focus to the best point with view and focus evaluation value, confirm that the zoom encoder output value ranges from V + y + 1 to V + y - 1. (See Certification number table below. The V is the Value at para 5.)
8. Press WIDE END button of Y/C Mix adapter to write data in EEPROM.

Note : If not focusing in item 7, bring into focus with the manual button of Y/C Mix adapter. And then press WIDE END button to write data in EEPROM.

9. Press PHOTO SENS. button of Y/C Mix adapter to write data in EEPROM.
10. Turn off the power and then on again.



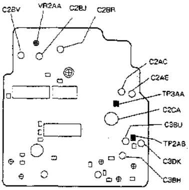
3. Substrate voltage and Reset Voltage	**Adjustment purpose:** Reference voltage for CCD drive. **Symptom when incorrectly adjusted:** S/N ratio lower or blooming

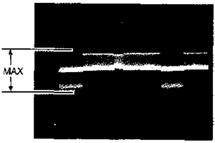
Measuring instrument and condition	Oscilloscope (Probe 10:1)
Test point	TP3AA
EXT trigger	—
Measurement range	DIV : 10 mV TIM : 10 μ s
Chart used	J chart

1. Set data of DAC address 17 to FF. Open the iris.
2. Attach a 1/100 extinction filter onto lens of the Camera unit.
3. Shoot the J chart illuminated from the rear with a halogen light at the standard angle of view.
4. Move the location of the halogen light so that level of waveform of TP3AA is at 300 mVp-p.
5. Detach the extinction filter from the lens.
6. Adjust VR2AA so that blooming doesn't appear on the screen.
7. Change the test point from TP3AA to TP2AB.
8. Set DAC address to 09.
9. Decrease data value of DAC address 09 from FF. When waveform shows the maximum and the level changes no longer, stop decreasing the data value.

Note : If level of the waveform isn't higher, set the data value to FF.

PCB SD/PC





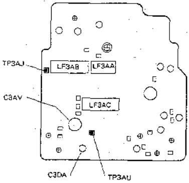
4. OB Offset	**Adjustment purpose:** Black colour level of CCD output signal **Symptom when incorrectly adjusted:** Black of CCD output signal will turn red or blue.

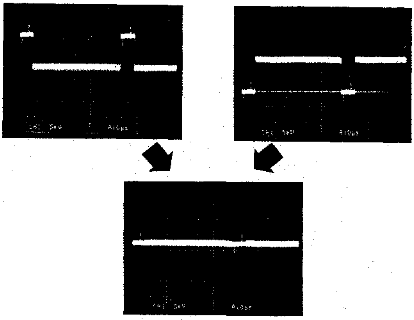
Measuring instrument and condition	Oscilloscope (Probe 10:1)
Test point	TP3AJ
EXT trigger	—
Measurement range	DIV : 5 mV TIM : 10 μ s
Chart used	Lens shaded

1. Ground TP3AU.
2. Set DAC address to 0E.
3. Adjust data of DAC address 0E so that offset is at the minimum.

Note : If it is hard to observe the waveform because of poor S/N ratio, observe it with a specified low pass filter.

PCB SD/PC



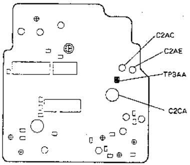


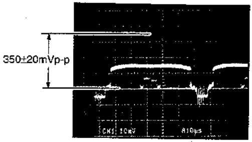
5. ALC	**Adjustment purpose:** Level of iris. **Symptom when incorrectly adjusted:** Poor gradation or whiten by excessive light.

Measuring instrument and condition	Oscilloscope (Probe 10:1)
Test point	TP3AA
EXT trigger	—
Measurement range	DIV : 10 mV TIM : 10 µ s
Chart used	Colour chart

1. Observe TP3AA through the low pass filter.
2. Set DAC address to 17.
3. Adjust data of DAC address 17 so that white peak to pedestal level is at 350 ± 20 mVp-p.

PCB SD/PC





6. CCD Gain	**Adjustment purpose:** Gain of delay line of Y/C signal. **Symptom when incorrectly adjusted:** Too sharp or too soft profile in the horizontal on the screen.

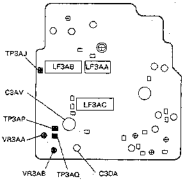
Measuring instrument and condition	Oscilloscope (Probe 10:1)
Test point	CH-1 : TP3AJ CH-2 : TP3AP
EXT trigger	—
Measurement range	DIV : 10 mV TIM : 10 µ s
Chart used	Window chart

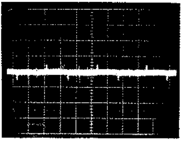
1. Adjust VR3AA so that the difference between TP3AJ and TP3AP with the oscilloscope is the minimum.

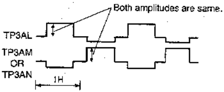
Note : Where TP3AP is observed through low pass filter.

2. Change connection of CH-2 of oscilloscope from TP3AP to TP3AQ. Detach the low pass filter of TP3AP.
3. Adjust VR3AB so that the difference between TP3AJ and TP3AQ with the oscilloscope is the minimum.
4. Change connection of CH-1 of oscilloscope from TP3AJ to TP3AL and CH-2 from TP3AQ to TP3AM.
5. Set mode of white balance to "Outdoor" (OPE address : 01).
6. Adjust VR3AC so that the amplitude of signal from TP3AL and TP3AM are same at one point and the 1 H later.
7. Adjust VR3AD so that the amplitude of signal from TP3AL and TP3AN are same at one point and the 1 H later.

PCB SD/PC







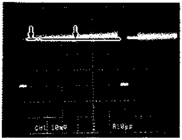
7. Setup Level

Adjustment purpose: Black level in video signal.

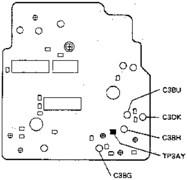
Symptom when incorrectly adjusted: Too bright or too dark picture.

Measuring instrument and condition	Oscilloscope (Probe 10:1)
Test point	TP3AY
EXT trigger	—
Measurement range	DIV : 10 mV TIM : 10 µ s
Chart used	Lens shaded

1. Set DAC address to 13.
2. Adjust data of DAC address 13 so that the setup level is at 0 ± 14 mVp-p.



PCB SD/PC



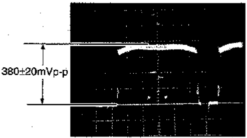
8. APL

Adjustment purpose: AGC of video signal processing circuit.

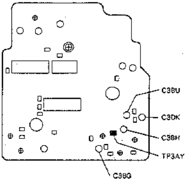
Symptom when incorrectly adjusted: Too bright or too dark picture.

Measuring instrument and condition	Oscilloscope (Probe 10:1)
Test point	TP3AY
EXT trigger	—
Measurement range	DIV : 10 mV TIM : 10 µ s
Chart used	Colour chart

1. Observe TP3AY through low pass filter.
2. Set DAC address to 0A
3. Adjust data of DAC address 0A so that level of background is at 380 ± 20 mVp-p.



PCB SD/PC



9. Aperture Correction

Adjustment purpose: Correction of profile correcting circuit.

Symptom when incorrectly adjusted: Too sharp or too soft picture.

Measuring instrument and condition	—
Test point	—
EXT trigger	—
Measurement range	—
Chart used	—

1. Set DAC address to 06.
2. Set data of DAC address 06 to 65.
3. Set DAC address to 07.
4. Set data of DAC address 07 to 70.

10. Chroma Gamma Leak

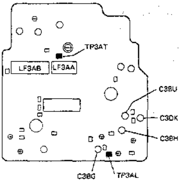
Adjustment purpose: *Correcting leak of colour signal occurring with gamma control.*

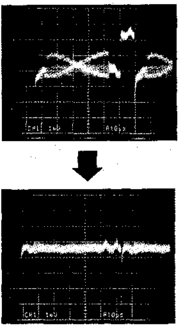
Symptom when incorrectly adjusted: Colour impurity.

Measuring instrument and condition	Oscilloscope (Probe 10:1)
Test point	TP3AL
EXT trigger	—
Measurement range	DIV : 1 mV TIM : 10 µ s
Chart used	Gray scale chart

1. Ground TP3AT at 100 µ F.
2. Set DAC address to 15.
3. Adjust data of DAC address so that gamma leak is the minimum.

PCB SD/PC



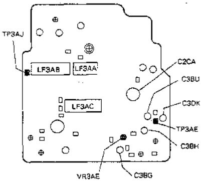


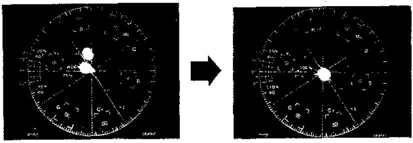
11. R-Y and B-Y Offsets	**Adjustment purpose:** Black level processed in colour-difference signal processing circuit. **Symptom when incorrectly adjusted:** Black in picture will turn red or blue.

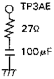
Measuring instrument and condition	Vector scope
Test point	Y/C Mix adapter Video output terminal
EXT trigger	—
Measurement range	GAIN : Max. SATURATION: 75%
Chart used	Lens shaded

1. Set mode of white balance to "Outdoor" (OPE address : 01)
2. Ground TP3AE through a series with a resistance (27Ω) and a capacitor (100 µF).
3. Ground TP3AJ through a capacitor (100 µF).
4. Adjust VR3AE so that these two bright spots are overlapped and minimized.
5. Detach the capacitor in TP3AJ.
6. Adjust DAC addresses 0D and 0C so that the bright spot is at the centre of the vector scope.

PCB SD/PC



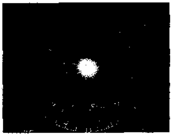




12. Chroma Offset and fH/2 Offset	**Adjustment purpose:** Black level before processing in colour-difference signal circuit. **Symptom when incorrectly adjusted:** Black in picture will turn red or blue.

Measuring instrument and condition	Vector scope
Test point	Y/C Mix adapter Video output terminal
EXT trigger	—
Measurement range	GAIN : Max. SATURATION: 75%
Chart used	Lens shaded

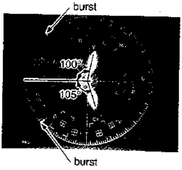
1. Adjust data of DAC addresses 10 and 0F so that bright spot is the closest to the centre of the vector scope.



13. White Balance	**Adjustment purpose:** Reference in displaying "white" on the screen. **Symptom when incorrectly adjusted:** icture will turn red or blue.

Measuring instrument and condition	Vectorscope
Test point	Y/C Mix adapter Video output terminal
EXT trigger	—
Measurement range	GAIN : Variable, SATURATION : 75 %
Chart used	White chart

1. Set mode of white balance to "Indoor" (OPE address : 02)
2. Adjust DAC addresses 00 and 01 so that bright spot is at the centre of the vector scope.
3. Set mode of white balance to "Outdoor" (OPE address : 01)
4. Shoot the White chart with a colour filter (C2 + C12).
5. Adjust phase and gain of vectorscope so that burst signal spots at intersection of reference lines of burst and scale circle.
6. Adjust DAC addresses 02 and 03 so that bright spots is at the position in phot. below.



14. Amplifier Output of Iris Hole Element	**Adjustment purpose:** Reading sensor voltage in both sides of iris. **Symptom when incorrectly adjusted:** Poor response of Auto focus.

Measuring instrument and condition	—
Test point	—
EXT trigger	—
Measurement range	—
Chart used	—

1. Set DAC address to 37.
2. Shoot a halogen light at a distance of about one metre from the Camera unit. After one second or more, press TELE END button of the Y/C Mix adapter to write the data in EEPROM.
3. Shade the lens.
4. After shading the lens for one second or more, press WIDE END button of to Y/C Mix adapter to write the data in EEPROM.

***Adjustments from item 15 on, must be performed with the camera connected to the VCR.**

15. Fsc	**Adjustment purpose:** Frequency of reference frequency oscillator in colour signal processing circuit. **Symptom when incorrectly adjusted:** Poor colour display in picture.

Measuring instrument and condition	Frequency counter
Test point	TP6J
EXT trigger	—
Measurement range	—
Chart used	—

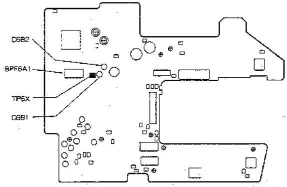
1. Play back alignment tape (colour bar).
2. Adjust VC6A1 so that the frequency is at 4.433619MHz ± 50Hz.

16. Chroma VCO	**Adjustment purpose:** Frequency of reference oscillator in low frequency colour signal processing circuit. **Symptom when incorrectly adjusted:** Poor colour display in picture.

Measuring instrument and condition	Frequency counter
Test point	TP6X
EXT trigger	—
Measurement range	—
Chart used	Lens shaded

1. Set DAC address to 1A and the data to 00.
2. Set DAC address to 19.
3. Adjust data of DAC address 19 so that the frequency is at 613 ± 3 kHz.
4. Set data of DAC address 1A to FF.

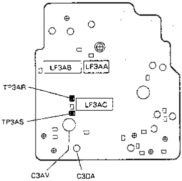
PCB VTR



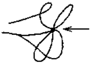
17. Chroma R-Y and B-Y Off set, and Burst Signal	**Adjustment purpose:** Setting white level in picture to the best and chroma level in video output signal to the regular. **Symptom when incorrectly adjusted:** White in picture will turn blue or red. Or, colour signal will not displayed regularly.

Measuring instrument and condition	Vector scope
Test point	Video output terminal
EXT trigger	—
Measurement range	GAIN : Max. SATURATION : 75 %
Chart used	Colour chart

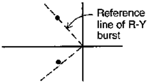
PCB SD/PC



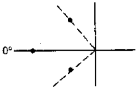
1. Adjust DAC addresses 11 and 12 so that bright spot is the closest to the centre point of the vector scope.


Set the brightest spot in this point to the centre of the vector scope.

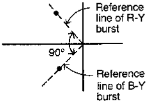
2. Set mode of vector scope to PAL. Rotate the gain to locate reference line of R-Y burst signal at the regular position on the vector scope.



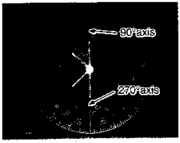
3. Ground TP3AR through a capacitor (100 µF).
4. Set DAC address to 16.
5. Adjust data of DAC address 16 so that bright spot is on the line 0°.

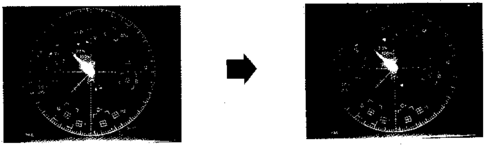


6. Set DAC address to 1B.
7. Adjust data of DAC address 1B so that the angle between spots of R-Y and B-Y burst signals is 90°.
8. Detach the capacitor in TP3AR.



9. Ground TP3AS through a capacitor (100 µF).
10. Set DAC address to 18.
11. Adjust data of DAC address 18 so that the longest of luminescent lines around 90' -axis is lied on the axis.
12. Set DAC address to 1B.
13. Adjust data of DAC address 1B so that the longest of luminescent lines around 270' -axis is lied on the axis.
14. Detach the capacitor in TP3AS.
15. Repeat items 2 to 7.
16. Set mode of vectorscope to NTSC.
17. Set DAC address to 16.
18. Adjust data of DAC address 16 so that two bright spots of red are overlapped each other.
19. Set DAC address to 14.
20. Adjust data of DAC address 14 so that bright spot of burst signal is at 7.

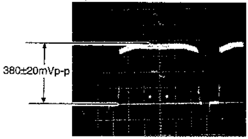




18. Camera APL	**Adjustment purpose:** Regular level of video signal. **Symptom when incorrectly adjusted:** Too bright or too dark picture.

Measuring instrument and condition	Oscilloscope (Probe 10:1)
Test point	Video output terminal (75 Ω terminated)
EXT trigger	—
Measurement range	DIV : 10 mV TIM : 10 μ s
Chart used	Colour chart

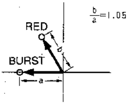
1. Set DAC address to 0A.
2. Adjust data of DAC address 0A so that background level is at 380 ± 20 mVp-p.

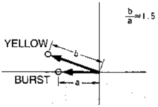


19. Gain of R-Y and B-Y, and Chroma hue	**Adjustment purpose:** Gain of colour-difference signal and chroma hue of composite signal. **Symptom when incorrectly adjusted:** Colour signal will not be displayed on the screen regularly.

Measuring instrument and condition	Vectorscope
Test point	Video output terminal
EXT trigger	—
Measurement range	GAIN : regular SATURATION : 75%
Chart used	Colour chart

1. Set mode of white balance to "Indoor" (OPE address : 02).
2. Set DAC address to 04.
3. Adjust data of DAC address 04 so that the distance from the centre of vectorscope to bright spot of red is 1.05 times that of burst.
4. Set DAC address to 05.
5. Adjust data of DAC address 05 so that the distance from the centre of vectorscope to the bright spot of yellow is 1.5 times that of burst.



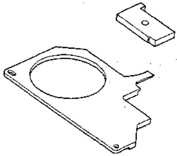
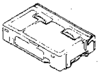
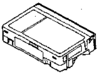


6. Set DAC address to 0B.
7. Adjust data of DAC address 0B so that phase of the spot of red is at 106 ± 2°.
8. Repeat the adjusting procedures above so that all values are set at the specified.

MECHANICAL ADJUSTMENT

1. Jigs and Measuring Instruments Required for Mechanism Adjustment

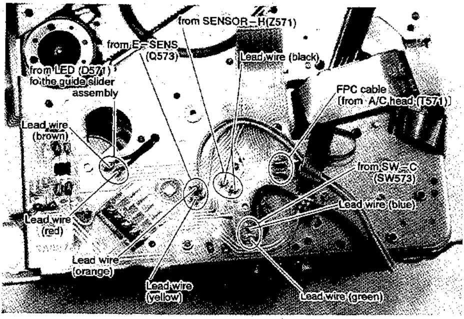
1-1. Jigs for Adjustment

Master plane	Cassette torque meter	Alignment tape
859C398050	859C360010	PM6KE2CS (859C397060) PM3KE6(CH1)C35 (859C399040) PMX – C (859C399050)
		

1-2. Other Tools and Measuring Instruments Required

① Colour monitor (Colour TV)
② Oscilloscope
③ Hex key (1.5mm, 0.7mm)
④ Box driver (3.0mm)

1-3. Soldering points of lead wire


from SENSOR – H(Z571)
from E – SENS (Q573)
Lead wire (black)
from LED (D571) to the guide slider assembly
FPC cable [from A/C head (T571)]
Lead wire (brown)
from SW – C (SW573)
Lead wire (blue)
Lead wire (red)
Lead wire (orange)
Lead wire (yellow)
Lead wire (green)

2. CLEANING

The following parts should be routinely cleaned as part of service or to maintain top performance.

2-1 Cleaning the video heads

① Deposits of dust and similar foreign material on the head cause the head to fail to reproduce clear image. Hold a video head cleaning cloth dampened with cleaning solution, lightly against the drum. Holding the cloth, gradually rotate the drum counterclockwise.

Note:

Do not touch the head tips in to the upper drum. The head tip is very hard but not resistant against impact (particularly against force in vertical direction). Never move the head tip in vertical direction.

② Do not run a tape before the drum is fully dry. Residual solution may damage the tape.

2-2 Cleaning the tape path system

The parts along the tape path,which need cleaning are listed below:

1. Regulator tension pole
2. Supply slant pole
3. Supply impedance pole
4. Supply tape guide pole
5. Supply guide roller
6. Drum assembly
7. Takeup guide roller
8. Takeup tape guide pole
9. Takeup slant pole
10. Takeup guide arm roller
11. A/C head
12. GR-lever roller
13. Capstan motor shaft
14. Pinch roller

Note:

Use a dry cleaning cloth to clean the supply guide roller and takeup guide roller. Do not use cleaning solution.

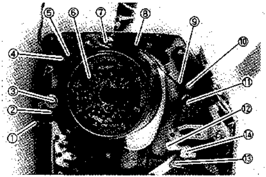


Fig. 1-1-1

2-3 Cleaning the reel disk driving system

① Clean the surface of the brake of the reel disk.

② Clean the reel disk drive member with a cleaning cloth damped with cleaning solution.

③ Do not operate the mechanism before cleaned parts are dry.

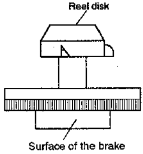


Fig. 1-1-2

3. HOW TO ATTACH THE MASTER PLANE

① Remove the cassette housing (see para. 4-1, HOW TO REPLACE THE PRINCIPAL PARTS)

② Feed the loading motor with approx. 3.5 VDC and put the deck to loading condition.

③ Place the master plane on the main plate so that the positioning pin enters the positioning hole and the plane is off the drum.

Note:

When using the master plane, firmly hold it by pressing at the point A as shown in Fig. 2-1.

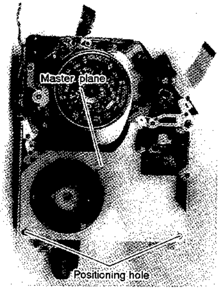


Fig. 2-1

4. HOW TO REPLACE THE PRINCIPAL PARTS

4-1 Cassette housing replacement

Removal

① Set the cassette housing to eject mode.
② Remove two screws (ⓐ, ⓑ) holding the leaf switch.
③ Remove two screws (ⓒ,ⓓ)holding the cassette housing.
④ Slide the cassette housing toward you. Push the link on supply side and takeup side (Fig.3-1-3 and 3-1-4) slightly to make clearance for the roller ; and remove the rollers from the grooves in the main plate. Remove the cassette housing.

Installation

① Set the cassette housing to eject mode.
② Push the link on supply side and takeup side (Figs. 3 -1 -3 and 3 -1 -4) slightly to make clearance for the roller; and insert the rollers into the grooves. Make sure that the sync shaft is under the fixing part of the leaf switch (see Fig. 3-1-6).
③ Referring to Fig. 3-1-5, engage the projection of the sync holder of cassette housing with the cutaway groove in the main plate.
④ Secure the cassette housing with screws ⓒand ⓑ.
⑤ Secure the leaf switch with screws ⓐand ⓑ.

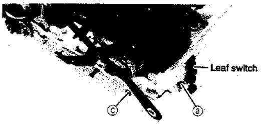

Leaf switch
ⓒ
ⓐ

Fig. 3-1-1

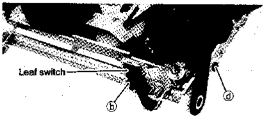

Leaf switch
ⓑ
ⓓ

Fig. 3-1-2

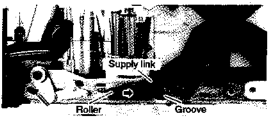

Supply link
Roller
Groove

Fig. 3-1-3

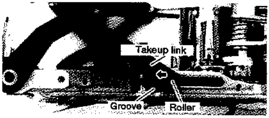

Takeup link
Groove
Roller

Fig. 3-1-4

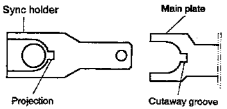

Sync holder
Main plate
Projection
Cutaway groove

Fig. 3-1-5

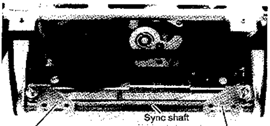

Sync shaft
Leaf switch fixing part
Leaf switch fixing part

Fig. 3-1-6

4-2 Damper unit replacement

Removal

① Remove screws ⓐ and ⓑ. Remove the damper unit (damper section) by movin it in the direction of arrow.
Note:
Gears in the damper unit may fall away. Be careful not lose them.
② Remove the cassette housing (see para. 4-1).
③ Remove cut washers ⓒ and ⓓ. Remove the link of supply side and takeup side from the bottom housing shaft.
④ Slide the supply arm to the rear end. While pushing the supply arm toward side, take out the bottom housing and damper unit (lever section) off respective groove.
⑤ Remove the cut washer ⓔ and then remove the damper unit (lever section).

Installation

① Attach the cut washer ⓔ and secure the damper unit (lever section).
② Put the roller of supply arm into the groove in the damper unit (lever section) and in the bottom housing.
③ Slide the link of the supply side and takeup side onto respective pins of the bottom housing, attach cut washers ⓒ and ⓓ and secure supply side link and takeup side link.
④ Lower the damper unit (lever section) ⓐ and ⓑ secure it with screws ⓐ and ⓑ.

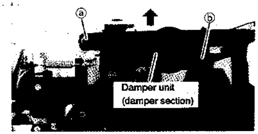

ⓐ
ⓑ
Damper unit
(damper section)

Fig. 3-2-1

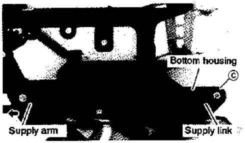

Bottom housing
ⓒ
Supply arm
Supply link

Fig. 3-2-2

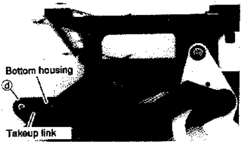

Bottom housing
ⓓ
Takeup link

Fig. 3-2-3

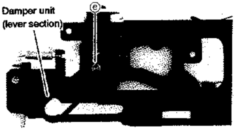

Damper unit
(lever section)
ⓔ

Fig. 3-2-4

4-3 Drum assembly replacement

Removal

① While supporting the drum assembly, remove screws ⓐ, ⓑ and ⓒ that hold the assembly.
② Gradually lift up the drum assembly, take care to clear adjacent components.

Installation

① Insert two FPC cables from the drum assembly into the respective grooves in the main plate.
② Place the drum assembly on the main plate while taking care not to touch adjacent components. Align the positioning pin of the assembly with the positioning hole in the main plate.
③ Secure the drum assembly with screws ⓐ, ⓑ and ⓒ.

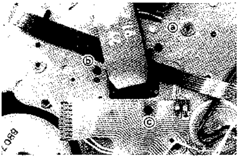


Fig. 3-3-1

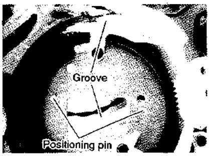


Fig. 3-3-2

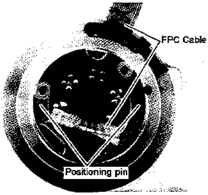


Fig. 3-3-3

4-4 Loading motor replacement

Removal

① Remove screws ⓐ and ⓑ and then remove the loading motor.

Installation

① Verify that the motor holder is placed on the loading motor mounting area of the main plate.
② Engage the loading motor gear and idler gear S. Secure the motor with screws ⓐ and ⓑ.

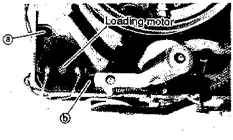


Fig. 3-4-1

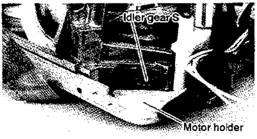


Fig. 3-4-2

4-5 Reel disk replacement

Removal

① Remove the cassette housing (see para. 4-1).
② Remove cut washer ⓐ. Remove the reel disk from the shaft of the main plate.

Installation

① Make sure that two thrust washers are on the reel disk mounting shaft on the main plate.
② Gradually place the reel disk to the shaft of the main plate. Make sure that the tension belt is attached along the brake surface of the supply reel disk.
③ Attach the cut washer ⓐ and secure the reel disk.
④ Make sure that the reel disk turns smoothly.
⑤ Attach the master plane (see para. 3).
⑥ Place a height adjusting square on the master plane.
⑦ Slide the height measuring face of the square to the edge of the reel disk, and make sure that the reel disk turns smoothly at the face A of the square (upper face of measuring part) and will not turn at face B (lower surface of measuring Block).
⑧ If the result of step (7) is not acceptable, add or remove thrust washer(s) (material code: 552C006O10) under the reel disk.
⑨ Mount the cassette housing.

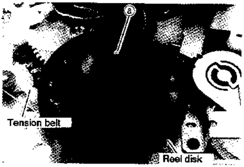


Fig. 3-5-1

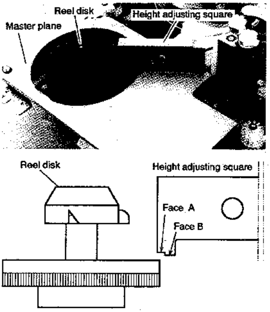


Fig. 3-5-2

4-6 Reel gear replacement

Removal

① Remove the cassette housing (see para. 4-1).
② Remove the cut washer ⓐ and then remove the gear TU1 from the main plate shaft.
③ Remove the cut washer ⓑ holding the reel gear.
④ Slightly move the clutch plate OFF in the direction of arrow and remove the reel gear from the main plate shaft.

Installation

① Make sure that the thrust washers are on the reel gear mounting shaft.
② Slightly move the clutch plate OFF in the direction of arrow and place the reel gear to the main plate shat.
③ Secure the reel with the cut washer ⓑ.
④ Make sure that the thrust washer is attached on the gear TU1 mounting shaft.
⑤ Place the gear TU1 to the mounting shaft on the main plate and secure the gear with the cut washer ⓐ.
⑥ Mount the cassette housing.

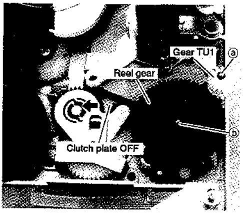


Fig. 3-6-1

4-7 Sync belt replacement

Removal

① Remove the cassette housing (see para. 4-1).
② Remove screws ⓐ and ⓑ that holding the idler unit.
③ Remove the sync belt from the capstan motor and idler unit.

Installation

① Attach the sync belt to the capstan motor and idler unit.
② Secure the idler unit with screws ⓐ and ⓑ.
③ Mount the cassette housing.

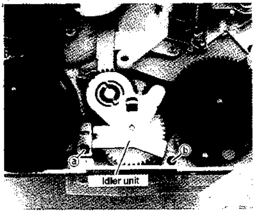


Fig. 3-7-1

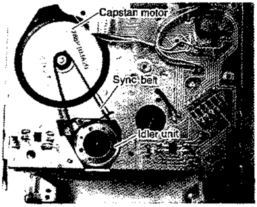


Fig. 3-7-2

4-8 Clutch unit replacement

Removal

① Remove the cassette housing (see para. 4-1).
② Remove all the parts described in para. 4-6 (Reel gear replacement).
③ Remove spring RS.
④ Remove the cut washer ⓐ and then remove the clutch unit from the main plate shaft and clutch plate OFF shaft.

Installation

① Attach the clutch unit to the main plate shaft and clutch plate OFF shaft.
② Secure the clutch unit with the cut washer ⓐ.
③ Attach the spring RS.
④ Mount all the parts described in para. 4-6 (Reel gear replacement).
⑤ Mount the cassette housing.

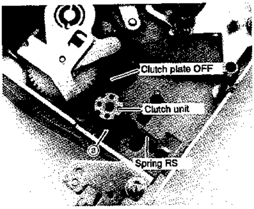


Fig. 3-8-1

4-9 A/C head replacement

Removal

① Remove the cassette housing (see para. 4-1).

② FPC cable connected to the A/C head is taped on the reverse side of the main plate with pressure sensitive adhesive double coated tape (see Fig. 3-9-1). Melt soldering of the FPC cable soldered on the FPC sensor assembly. Detach it from the tape carefully and take it off the slant T.

③ Remove nut S.

④ Pull the A/C head assembly gradually off the shaft on the capstan motor stator.
Note:
Removing the A/C head also loosens the A/C washer and spring G on the shaft. Take care not to lose them.

⑤ Pull the GR-lever roller and A/C arm spring off the A/C plate as shown in Fig. 3-9-3.

⑥ Remove screws ⓐ, ⓑ and ⓒ. Remove the A/C head and A/C plate spring from the A/C plate.

⑦ Desolder the lead wires at the A/C head.

Installation

① Solder the lead wires to the A/C head.

② Mount the A/C plate spring and A/C head on the A/C plate. Secure these parts with screws ⓐ, ⓑ and ⓒ to the dimension shown in Fig. 3-9-4.

③ Place the A/C arm spring and GR-lever to the A/C plate shaft. For mounting status of the A/C arm spring, see Fig. 3-9-2.

④ Attach the A/C head assembly to the shaft of the capstan motor stator. To do so, move the GR-lever roller in the direction of arrow in Fig.3-9-2. Orient the assembly so that the GR-lever tipR Ⓐ is inside the main plate and the A/C head phase adjuster screw Ⓑ of the A/C plate is outside the main plate.

⑤ Tighten the nut S (temporary).

⑥ Install the master plane (see para. 3).

⑦ Place the height adjusting square on the master plane.

⑧ Adjust nut S so that the center of the distance between measuring faces Ⓐ and Ⓑ of the square is at the same level as the edge of the lowerflange of GR-lever roller. This is a critical adjustment since the distance between the Ⓐ and Ⓑ faces is small.
Note:
Check the adjustment by turning the GR-lever roller. It should rotate smoothly without touching the arm pinch.

⑨ Put the FPC cable connected to the A/C head through slant T. Tape it on the reverse of the Main plate with pressure sensitive adhesive double coated tape (see Fig. 3-9-1). Solder it on the FPC sensor assembly.

⑩ Mount the cassette housing.

⑪ Following the description in para. 5-5, A/C head adjustment.

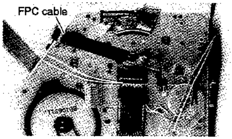


Fig. 3-9-1

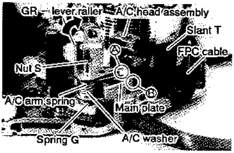

GR-lever roller
A/C head assembly
Slant T
FPC cable
Nut S
Ⓐ
Ⓒ
Ⓑ
A/C arm spring
Main plate
Spring G
A/C washer

Fig. 3-9-2

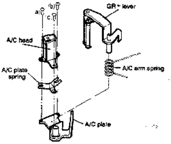

a
(b)
c
GR-lever
A/C head
A/C plate spring
A/C arm spring
A/C plate

Fig. 3-9-3

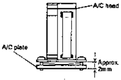
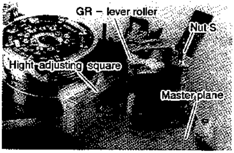

A/C head
A/C plate
Approx. 2mm

Fig. 3-9-4


GR-lever roller
Nut S
Hight adjusting square
Master plane

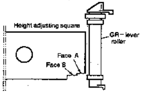

Height adjusting square
GR-lever roller
Face A
Face B

Fig. 3-9-5

4-10 Pinch roller assembly and Pinch roller replacement

4-10-1 Pinch roller assembly replacement

Removal

① Remove the cassette housing (see para. 4-1).
② Remove the A/C head assembly (see para. 4-9).
③ Pull out A/C washer and spring G off the A/C head mounting shaft.
④ Remove the cam gear TUG from the A/C head assembly mounting shaft.
⑤ Remove the pinch roller arm spring.
⑥ Remove screw ⓐ and then pinch roller washer.
⑦ Remove the pinch roller assembly from the shaft on the capstan motor stator.

Installation

① Mount the pinch roller assembly on the shaft on the capstan motor stator. Be sure to position the pin at lower part of the pinch roller assembly to the part of the takeup guide arm shown in Fig.3-10-2.
② Attach the pinch roller washer to the pinch roller assembly. Secure the pinch roller with the screw ⓐ.
③ The cam gear TUG has two positioning pins at the lower part. Attach the cam gear TUG to the takeup guide arm by first aligning the positioning pins with the positioning holes (Fig. 3-10-2) in the takeup guide.
④ Attach the spring G and A/C washer to the A/C head assembly mounting shaft.
⑤ Mount the A/C head assembly.
⑥ Mount the cassette housing.

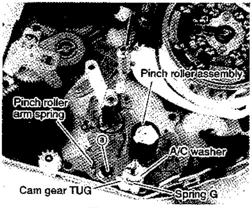

Pinch roller assembly
Pinch roller arm spring
ⓐ
A/C washer
Cam gear TUG
Spring G

Fig. 3-10-1

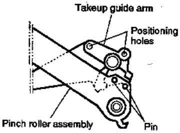

Takeup guide arm
Positioning holes
Pinch roller assembly
Pin

Fig. 3-10-2

4-10-2 Pinch roller replacement

Removal

① Remove the cassette housing (see para. 4-1).
② Set the deck to loaded status. Release the load just before the pinch roller touches the capstan motor shaft (see Fig. 3-10-3).
③ Move the GR-lever roller in the arrow - shown in Fig. 3-10-3, and then gradually remove the pinch roller cap.
④ Slide the pinch roller off the pinch roller arm shaft.

Installation

① Move the GR-lever roller in the direction of arrow.
② Make sure that the cam L-GR is attached on the pinch roller arm. Attach the pinch roller to the pinch roller arm shaft with orientation as shown in Fig. 3-10-4.
③ Attach the pinch roller cap to the pinch rollerarm shaft with the orientation as shown in Fig. 3-10-4.

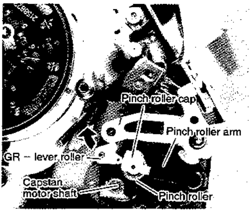

Pinch roller cap
Pinch roller arm
GR - lever roller
Capstan motor shaft
Pinch roller

Fig. 3-10-3

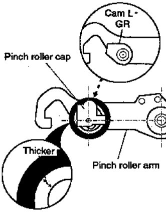

Cam L-GR
Pinch roller cap
Thicker
Pinch roller arm

Fig. 3-10-4

4-11 Slant T replacement

Removal

① FPC cable connected to the A/C head is taped on the reverse of the main plate with pressure sensitive adhesive double coated tape (see Fig. 3-11-1). Detach it from the tape carefully and take it off the slant T.

② Remove screws ⓐ and ⓑ, and then slant T.

Installation

① Make sure that the lock arm spring and lock lever T-B are mounted as shown in Fig. 3-11-3.

② Attach the slant T to the main plate shaft.

③ Secure the slant T with screws ⓐ and ⓑ.

④ Put the FPC cable connected to the A/C head through slant T. Tape it on the reverse of the main plate with pressure sensitive adhesive double coated tape.

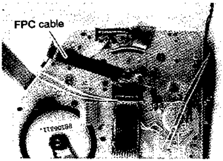


Fig. 3-11-1

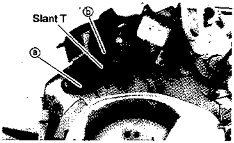


Fig. 3-11-2

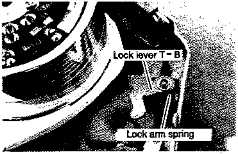


Fig. 3-11-3

4-12 Takeup guide arm replacement

Removal

① Remove the cassette housing (see para. 4-1).
② Remove the A/C head assembly (see para. 4-9).
③ Remove all the components described in para. 4-10-1 (Pinch roller assembly replacement).
④ Remove all the components described in para. 4-11 (Slant T replacement).
⑤ Remove the takeup guide arm from the stator shaft of the capstan motor and pin of the cam lever T.

Installation

① Attach the takeup guide arm to the stator shaft of the capstan motor so that the positioning pin of the cam lever T fits into the positioning hole in the link rod.
② Attach all the components described in para. 4-11 (Slant T replacement).
③ Attach all the components described in para. 4-10-1 (Pinch roller assembly replacement).
④ Mount the A/C head assembly.
⑤ Mount the cassette housing.

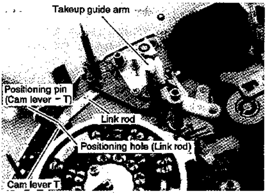

Takeup guide arm
Positioning pin
(Cam lever - T)
Link rod
Positioning hole (Link rod)
Cam lever T

Fig. 3-12-1

4-13 Supply impedance roller replacement

Removal

① Remove the screw ⓐ and then the tape end sensor.
② Remove the impedance spring.
③ Remove the cut washer ⓑ. Pull the supply impedance roller assembly from the main plate shaft.

Installation

① Attach the supply impedance roller assembly to the main plate shaft and then secure the assembly with the cut washer ⓑ.
② Attach the impedance roller spring.
③ Secure the tape end sensor assembly with the screw ⓐ.

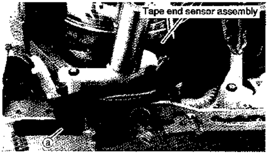

Tape end sensor assembly
ⓐ

Fig. 3-13-1

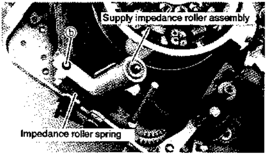

Supply impedance roller assembly
ⓑ
Impedance roller spring

Fig. 3-13-2

4-14 Capstan motor replacement

Removal

① Remove the cassette housing (see para. 4-1).
② Remove all the components described in para. 4-6 (Reel gear replacement).
③ Remove the A/C head assembly (see para. 4-9).
④ Remove all the components described in para. 4-10-1 (Pinch roller assembly replacement).
⑤ Remove all the components described in para. 4-11 (Slant T replacement).
⑥ Remove the lock lever T-B and lock arm spring.
⑦ Remove the takeup guide arm (see para. 4-12).
⑧ Remove screws ⓐ and ⓑ and the tape pilot unit.
⑨ Remove washer ⓒ and the sub pinch roller spring.
⑩ While slightly lifting up the pinch roller lever B, remove the pin roller links A and B.
⑪ Remove the sync belt (see para. 4-7).
⑫ Remove screws ⓓ, ⓔ and ⓕ and then capstan motor.

Installation

① Pass the FPC cable of the capstan motor through the FPC entry hole in the main plate (Fig. 3-14-1) and under the pinch roller lever B; and then mount the capstan motor on the main plate.
② Secure the capstan motor with screws ⓓ, ⓔ and ⓕ.
③ Attach the sync belt.
④ While slightly liftting up the pinch roller lever B, insert the pin of the pinch roller link A into the hole of the pinch roller lever B. Mount the pinch roller links A and B.
⑤ Referring to Fig. 3-14-2, attach the sub pinch roller spring to the pinch roller link B. Secure the link B with the washer ⓒ shown in Fig. 3-14-1.
⑥ Secure the tape pilot unit with screws ⓐ and ⓑ. Tighten screw ⓐ first.
⑦ Attach the takeup guide arm.
⑧ Attach the lock arm spring and lock lever T-B.
⑨ Attach all the components described in para. 4-11 (Slant T replacement).
⑩ Attach all the components described in para. 4-10-1 (Pinch roller assembly replacement).
⑪ Mount the A/C head assembly.
⑫ Attach all the components described in para. 4-6 (Reel gear replacement).
⑬ Mount the cassette housing.

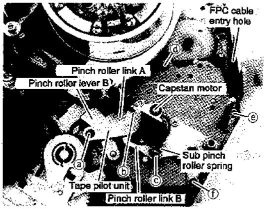


Fig. 3-14-1

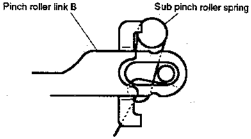


Fig. 3-14-2

4-15 Supply tape guide assembly and Supply guide roller replacement

4-15-1 Supply tape guide assembly replacement

Removal

① Remove the cassette housing (see para. 4-1).
② Remove the drum assembly (see para. 4-3).
③ Remove the reel disk (see para. 4-5).
④ Remove the supply impedance roller assembly (see para. 4-13).
⑤ On the FPC sensor board, desolder the two lead wires from the LED of the guide slider assembly.
⑥ Remove the cut washer ⓐand then regulator tension.
⑦ Remove screws ⓑ, ⓒ and ⓓ, and then guide slider assembly.
⑧ Remove the supply tape guide assembly from the supply lever by moving the tape guide in the direction of arrow (Fig. 3-15-3).

Installation

① Attach the supply tape guide assembly to the supply lever by moving the guide in the direction opposite to arrow in Fig. 3-15-3.
② Pass the two lead wires from the LED of the guide slider assembly through the hole in the main plate. Secure the guide slider with screws ⓑ, ⓒand ⓓ.
③ Solder the two lead wires from the LED mounted on the guide slider assembly to the FPC sensor board.
④ Secure the regulator tension with the cut washer ⓐ.
⑤ Attach the supply impedance roller assembly.
⑥ Mount the reel disk.
⑦ Mount the drum assembly.
⑧ Mount the cassette housing.

4-15-2 Supply guide roller replacement

Removal

① Remove the cassette housing (see para. 4-1).
② Load the deck to a degree so that the set screw can be turned.
③ Loosen the set screw enough for the guide roller to turn easily.
④ Turn the supply guide roller counter-clockwise and remove it from the supply tape guide.

Installation

① Turn the supply guide roller fully clockwise three times to fix it to the supply tape guide.
② Lightly tighten the set screw.
③ Mount the cassette housing.
④ Following the description in para. 5-2, check FM envelope and adjust it as necessary.

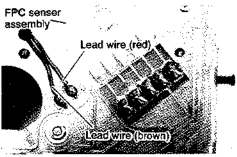

FPC senser assembly
Lead wire (red)
Lead wire (brown)

Fig. 3-15-1

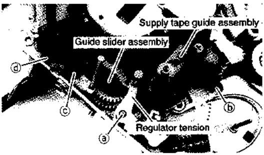

Supply tape guide assembly
Guide slider assembly
ⓓ
ⓒ
ⓑ
Regulator tension
ⓐ

Fig. 3-15-2

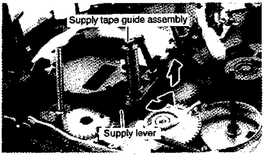

Supply tape guide assembly
Supply lever

Fig. 3-15-3

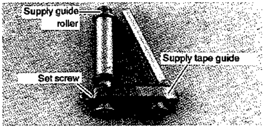

Supply guide roller
Supply tape guide
Set screw

Fig. 3-15-4

4-16 Takeup tape guide assembly and Takeup guide roller replacement

4-16-1 Takeup tape guide assembly replacement

Removal

① Remove the cassette housing (see para. 4-1).
② Remove the drum assembly (see para. 4-3).
③ Remove screws ⓐ and ⓑ and then the guide slider T.
④ Slide the takeup tape guide assembly in the direction of arrow (Fig. 3-16-1) and remove it from the guide slider T.
⑤ Remove the cut washer ⓒ and then pull out the takeup tape guide assembly off the takeup arm shaft.

Installation

① Attach the takeup guide assembly to the takeup arm shaft. Secure the takeup tape guide assembly with the cut washer ⓒ.
② Attach the takeup tape guide assembly to the guide slider T by sliding the guide in the direction opposite to the arrow shown in Fig. 3-16-1.
③ Attach the junction of guide sliders T and R as shown in Fig. 3-16-1. Secure the guide slider T with screws ⓐ and ⓑ.

4-16-2 Takeup guide roller replacement

Removal

① Remove the cassette housing (see para. 4-1).
② Load the deck to a degree so that the set screw can be turned.
③ Loosen the set screw enough to allow the takeup guide roller to turn easily.
④ Turn the takeup guide roller counter-clockwise and remove it from the takeup tape guide.

Installation

① Turn the takeup guide roller fully clockwise three times to fix it to the takeup tape guide.
② Lightly tighten the set screw.
③ Mount the cassette housing.
④ Following the description in para. 5-2, check FM envelope and adjust it as necessary.

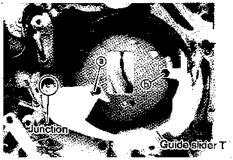


Fig. 3-16-1

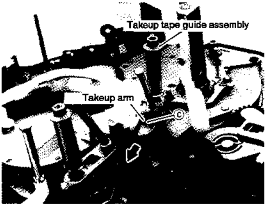


Fig. 3-16-2

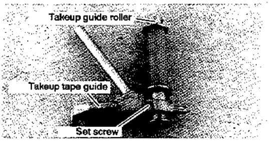


Fig. 3-16-3

4-17 Mode switch replacement

Removal

① Remove the cassette housing (see para. 4-1).
② Remove the drum assembly (see para. 4-3).
③ Remove the reel disk (see para. 4-5).
④ Remove the supply impedance roller assembly (see para. 4-14).
⑤ Following steps in para. 4-15-1(Supply tape guide assembly replacement), remove the guide slider assembly.
⑥ Remove screws ⓐ and ⓑ and then the guide slider R.
⑦ Remove the tension spring 1.
⑧ Remove the cut washer ⓒ and then the tension spring 2 and tension holder from the main plate shaft.
⑨ Remove the cut washer ⓓ and then the regulator arm from the main plate shaft.
⑩ Desolder the 5 solder terminals of the mode switch on the FPC sensor board.
⑪ Remove screws ⓔ and ⓕ, and then the mode switch.

Installation

① Make sure that the cam M positioning hole is aligned with the positioning hole in the main plate.
② Place the mode switch on the main plate so that the registration mark on the mode switch is aligned with that on the cam M. Secure the mode switch with screws ⓔ and ⓕ. Check continuity between the mode switch common terminal (COM) and each of other terminals (P0-P3).

The results should be as follows:

Between P0 ······· continuity
Between P1 ······· open
Between P2 ······· continuity
Between P3 ······· open

③ Solder the 5 solder terminals of the mode switch to the FPC board.
④ Fix the regulator arm tension holder and tension spring 2 to the main plate shaft with cut washers ⓒ and ⓓ.
⑤ Attach the tension spring 1.
⑥ Secure the guide slider R with screws ⓐ and ⓑ.
⑦ Mount the guide slider assembly, following the steps in para. 4-15-1 (Supply tape guide assembly replacement).
⑧ Mount the supply impedance roller assembly.
⑨ Mount the reel disk.
⑩ Mount the drum assembly.
⑪ Mount the cassette housing.

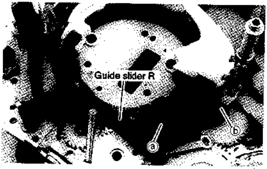

Guide slider R
ⓐ
ⓑ

Fig. 3-17-1

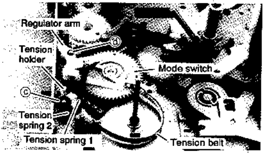

Regulator arm
ⓓ
Tension holder
Mode switch
ⓒ
Tension spring 2
Tension spring 1
Tension belt

Fig. 3-17-2

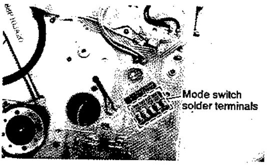

Mode switch solder terminals

Fig. 3-17-3

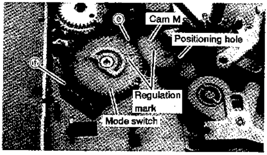

ⓔ
Cam M
Positioning hole
ⓕ
Regulation mark
Mode switch

Fig. 3-17-4

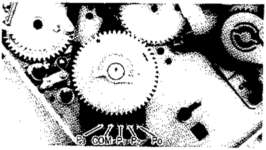

P3
COM
P1
P2
P0

Fig. 3-17-5

4-18 Cam T replacement

Removal

① Remove the cassette housing (see para. 4-1).
② Remove the drum assembly (see para. 4-3).
③ Remove all the components described in para. 4-6 (Reel gear replacement).
④ Remove the sync belt (see para. 4-7).
⑤ Remove the A/C head assembly (see para. 4-9).
⑥ Remove the pinch roller assembly (see para. 4-10-1).
⑦ Remove all the components described in para. 4-11 (Slant T replacement).
⑧ Remove the takeup guide arm (see para. 4-12).
⑨ Remove all the components described in para. 4-14 (Capstan motor replacement).
⑩ Remove the spacer and cam lever T.
⑪ Remove the screw ⓐ and then cam T.

Installation

① Make sure that registration marks and postioning holes of components shown in Fig. 3-18-3 are aligned with corresponding mark and hole of the main plate. Secure the supply cam S and cam S.
② Make sure that the lock lever T-A is attached on the main plate shaft.
③ Align the positioning holes of lock lever T-A,main plate and cam T. Attach the cam T to the main plate mounting shaft. Make sure that the gears of the cam T and takeup ring unit are meshed with each other.
④ Secure the cam T with screw ⓐ.
⑤ Attach the cam lever T and spacer to the main plate mounting shaft. Make sure that the cam T lower pin is in the groove in the cam T.
⑥ Mount all the components described in para. 4-14 (Capstan motor replacement).
⑦ Mount the takeup guide arm.
⑧ Mount all the components described in para. 4-11 (Slant T replacement).
⑨ Attach the pinch roller assembly.
⑩ Mount the A/C head.
⑪ Attach the sync belt.
⑫ Mount all the components described in para. 4-6 (Reel gear replacement).
⑬ Mount the drum assembly.
⑭ Mount the cassette housing.
⑮ Pull out the pin off the positioning hole in the supply cam S and cam S.

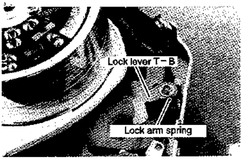

Lock lever T-B
Lock arm spring

Fig. 3-18-1

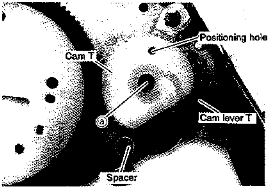

Positioning hole
Cam T
Cam lever T
ⓐ
Spacer

Fig. 3-18-2

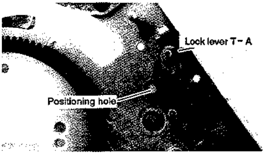

Lock lever T-A
Positioning hole

Fig. 3-18-3

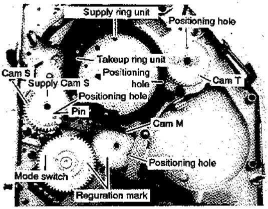

Supply ring unit
Positioning hole
Takeup ring unit
Cam S
Positioning hole
Supply Cam S
Cam T
Positioning hole
Pin
Cam M
Positioning hole
Mode switch
Reguration mark

Fig. 3-18-4

4-19 Tape guide stopper assembly replacement

Removal

① Remove the cassette housing (see para. 4-1).
② Remove the drum assembly (see para. 4-3).
③ Remove one screw ⓐ on the lower to dismount the tape guide stopper assembly and two screws ⓑ and ⓒ on the upper of tape guide stopper assembly.

Installation

① Fix the tape guide stopper assembly with two screws ⓑ and ⓒ on the upper and one screw ⓐ on the lower.
② Mount the drum assembly.
③ Mount the cassette housing.

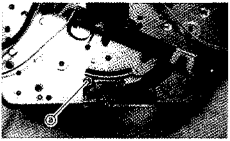


Fig. 3-19-1

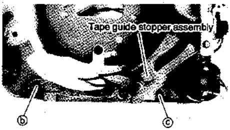


Fig. 3-19-2

5. ADJUSTMENTS

5-1 Back tension and Tension pole adjustment

① Set the unit to play mode.

② Measure the distance between the regulator tension pole and the internal surface of the main plate: should be 0.7 ± 0.2 mm (Fig. 4-1-1).

③ If the measurement is outside the range, adjust the regulator tension pole position adjuster screw for 0.7 ± 0.2 mm.

④ Set the back tension meter and set the unit to play mode.

⑤ When tape running becomes stable, read the back tension meter.

⑥ The reading should be 15 ± 3 g-cm.

⑦ If not, replace the tension spring 1 with a new one.

⑧ When tape running becomes stable, read the back tension meter, it should not vary 4 g-cm or more.

⑨ If the back tension varies more than 4 g-cm, the cause may be eccentric or defective reel disk. Replace with a new one.

⑩ After adjustment, record and play and check for no skew distortion and other parameters.

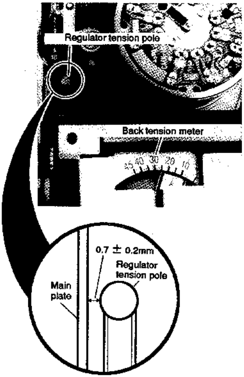

Regulator tension pole
Back tension meter
45 40 30 20 10
0.7 ± 0.2mm
Regulator tension pole
Main plate

Fig. 4-1-1

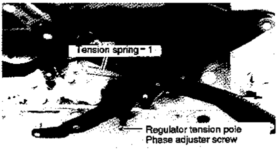

Tension spring-1
Regulator tension pole
Phase adjuster screw

Fig. 4-1-2

5-2 FM envelope check and adjustment

5-2-1 Guide roller check

① Play back the tape recorded using the recorder being tested.

② Visually check the tape at the supply and takeup guide rollers. There should be no gap between the lower face of the upper flange of the guide roller and the upper edge of the tape; and no wrinkle or crease.

③ Play an alignment tape (staircase waveform : PM6KE2CS).

④ Connect an oscilloscope to the TP2A. Trigger on the signal on TP5A.

⑤ Connect TP5R and TP5S to ground to force the digital tracking to enter preset mode.

⑥ Make sure that the both positive and negative peaks of the waveform are flat as shown in A of Fig. 4-2-1.

⑦ If the leading portion of FM waveform (supply side of the drum) is not flat (B, C of Fig. 4-2-1), adjust the height of the supply guide roller accoring to para. 5-2-2. If the period between adjacent FM waveforms is not flat (as waveforms D and E, drum takeup side), adjust the height of the takeup guide roller according to para. 5-2-3.

Note :

Turn the power off, and digital tracking mode will be set.

5-2-2 Supply guide roller height adjustment

① Loosen the set screw enough for the supply guide roller to turn easily.

② If the leading edge of the FM waveform (at drum supply side) looks like B in the figure, the height of the supply guide roller is low; if looks like C, the roller is high: adjust the height of the guide roller as described below, for obtaining flat waveform (A in the figure).
- Counterclockwise to raise the roller
- Clockwise to lower the roller

③ After adjustment, go to the phase adjustment (coarse).

5-2-3 Takeup guide roller height adjustment

① Loosen the set screw enough for the takeup guide roller to turn easily.

② If the period between adjacent FM waveforms (at drum takeup side) looks like D in the figure, the height of the takeup guide roller is low; If looks like E, the roller is high: adjust the height of the guide roller as described below, for obtaining flat waveform (A in the figure).
- Counterclockwise to raise the roller
- Clockwise to lower the roller

③ After adjustment, go to the phase adjustment (coarse).

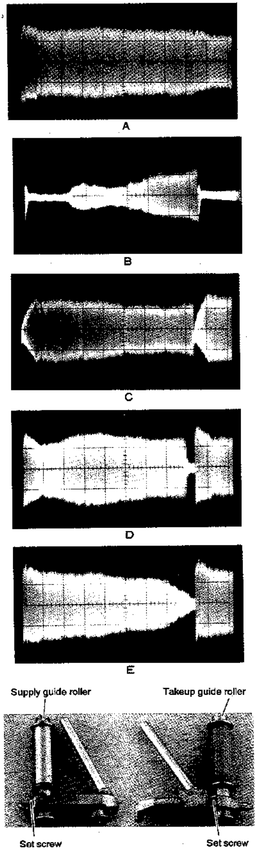


Fig. 4-2-1

5-3 Phase adjustment (coarse)

① Play the alignment tape (PMX-C).

② Connect the TP5R and TP5S of the PCB VTR to ground to force the digital tracking to enter preset mode.

③ Connect TP2A (PCB VTR) to CH-1, and audio output terminal to CH-2 of the oscilloscope. Trigger the scope on the signal from the TP5A (PCB VTR).

④ Absence of FM waveform and audio waveform should be almost conincidental (A of Fig.4-3-1).

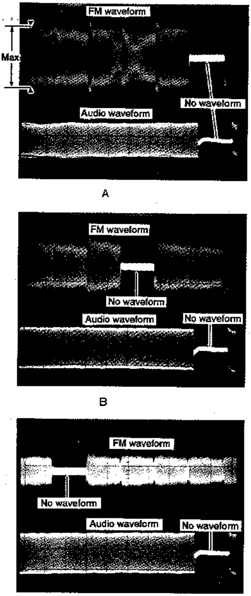
⑤ If the absence of FM waveform and audio waveform is completely out of phase as shown in B or C of the figure, turn the phase adjuster screw clockwise until the FM waveform looks like the waveform in A.

⑥ Fine tune the phase adjuster screw fo maximum FM wave amplitude without changing its phase with respect to that of audio signal.

⑦ After adjustment, apply locking material (paint or the like) to the phase adjuster screw.

Note :

Turn the power off, and digital tracking mode will be set.



A

B

C

Fig. 4-3-1

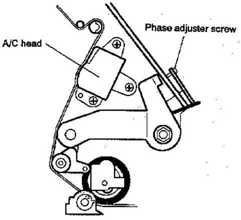


Fig. 4-3-2

5-4 FM waveform flatness check

① Play the alignment tape (staircase waveform : PM6KE2CS).

② Connect the oscilloscope to TP2A. Trigger on the TP5A output.

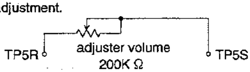
③ Connect the TP5R and TP5S of the VTR board to ground to force the digtal tracking to enter the preset mode.

④ Press PAUSE button. This enters manual digital tracking mode, enabling manual adjustment of tracking.

Note :

Installing manual tracking adjustment Connect a variable resistor (200K Ω) between TP5S and TP5R.

This variable resistor is the manual tracking adjustment.



⑤ Turn the manual tracking adj., verify that the amplitude of the FM waveform varies while remaining flat.

⑥ Set the manual tracking for maximum amplitude. Adjust vertical gain of the oscilloscope so that the waveform amplitude equals 5 divisions on the scope graticule.

⑦ Adjust the manual tracking adj. so that the middle portion(Portion "b" in Fig. 4-4-1) of the waveform is 80% the maximum amplitude, i.e. 4 divisions of the scope graticule. Verify that the FM waveform amplitude at drum supply side (portion "a" in the figure) and takeup side (portion "b" in the figure)are at 3.2 divisions of graticule.

⑧ If these values are not met, repeat the adjustment steps.

Note :

Turn the power off, and digital tracking mode will be set.

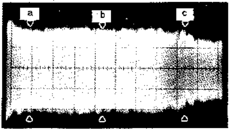


Fig. 4-4-1

5-5 A/C head adjustment

5-5-1 A/C head height, azimuth and slant adjustment

① Play the tape recorded using the recorder being adjusted.

② Alternately adjust the A/C head height adjuster screw and azimuth screw (ⓐ, ⓑ in Fig. 4-5-1) so that the top edge of the tape comes just below the top of the audio head as shown in Fig. 4-5-2.

③ Play the alignment tape (6 kHz audio signal : PM6KE2CS).

④ Connect the oscilloscope to an audio output terminal (CH R or L).

⑤ Alternately adjust A/C head height adjuster screw and azimuth adjuster screw (ⓐ, ⓑ) so that the audio output is maximum.

⑥ Play the tape used in step (1).

⑦ Verify that the tape position at the takeup guide arm roller is as shown in Fig. 4-5-4, "A" (lower tape edge is at the level of top face of the lower flange of the roller).

⑧ If the tape is positioned as shown in B or C of Fig. 4-5-4, adjust the A/C head slant adjuster screw (ⓒ in Fig. 4-5-1) to bring the tape to the position shown in A of Fig. 4-5-4.

When it looks like B: turn the screw ⓒ clockwise.

When it looks like C: turn the screw ⓒ counterclockwise.

Note :

Because the tape will not quickly respond to height adjustment, turn the screw ⓒ a little at a time, and then observe the tape for a while; and readjust as necessary.

⑨ After adjusting, disengage the tape. Reengage the tape and make sure that the tape comes at the position A of Fig. 4-5-4 in one second.

⑩ If the tape fails step ⑨, repeat steps ⑦ to ⑨.

Note :

One cycle of above steps may not bring satisfactory result. These steps may have to be repeated for fine tuning.

⑪ When the adjustment is complete, apply screw locking material (paint or the like) to A/C head adjuster screws ⓐ, ⓑ and ⓒ.

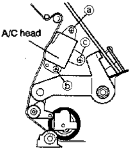


Fig. 4-5-1

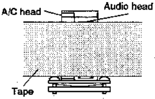


Fig. 4-5-2

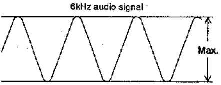


Fig. 4-5-3

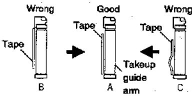


Fig. 4-5-4

5-6 GR-lever roller tape runing adjustment

Note:

This adjustment must follow the GR- lever roller height adjustment.

① Play a tape recorded using the recorder being adjusted.

② Observe status of the tape passing the GR lever roller against status illustrations in Fig. 4-6-1.

③ If the tape status looks like C or D in Fig. 4-6-1, adjust the GR-lever height adjuster nut shown in Fig. 4-6-2 so that the tape condition is A or B in Fig. 4-6-1.

Note:

Do not turn the GR- lever height adjuster nut more than 1/2 turn.

④ After adjustment, unload the tape. Load the tape again and set to play mode, and make sure the tape becomes status A or B in one second.

⑤ If not, repeat the step ③.

5 – 7 Phase adjustment (fine)

① Connect the oscilloscope to TP2A and trigger on the signal from the TP5A.

② Play the alignment tape. [PM3KE6(CH1)C35]

③ Connect the TP5R and TP5S of the VTR board to ground to force the digital tracking to enter the preset mode.

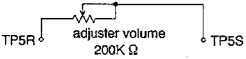
④ Adjust the phase adjuster screw so that the FM waveform is maximum.

⑤ Press PAUSE button. This enters manual digital tracking mode, enabling manual adjustment of tracking.

Note:

Installing manual tracking adjustment Connect a variable resistor (200K Ω) between TP5S and TP5R.

This variable resistor is the manual tracking adjustment.



⑥ Adjust the manual tracking adj. so that the FM waveform is maximum aplitude. Adjust the vertical gain control of the oscilloscope so that the FM waveform swings across 5 divisions on the graticule.

⑦ Press the pause button. The digital tracking is now in preset mode.

⑧ Verify that the amplitude is 4.8 divisions or more on the scope graticule.

⑨ If the amplitude is lower than this value, clean the drum by following the stels of para. 2 - 1 (Cleaning the video heads).

⑩ Repeatedly load and unload a tape for use with the recorder, verify that the FM waveform won't vary.

Note :

Turn the power off, and digital tracking mode will be set.

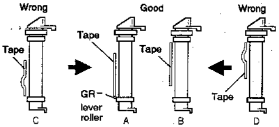


Fig. 4-6-1

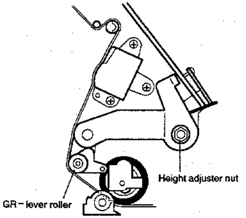


Fig. 4-6-2

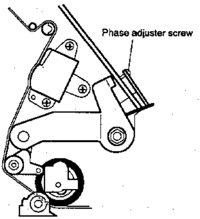


Fig. 4-7-1

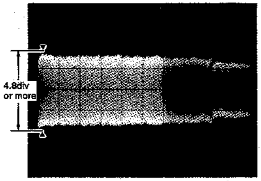


Fig. 4-7-2

KEY TO ABBREVIATIONS

A/C : Audio/Control
ACC : Automatic Color Control
A.E : Audio Erase
AFC : Automatic Frequency Control
AFT-D : Automatic Fine Tuning Door Switch
AGC : Automatic Gain Control
AL : After Load
AMP : Amplifier
ANT : Antenna
A-PB : Audio-Playback
A-REC : Audio-Recording
ALC : Automatic Level Control

B-FS : Brake Forward Search
B-RS : Brake Reverse Search
BPF : Band-Pass Filter
B/W : Black and White
BS : Band SW

CASS : Cassette
CP : Capstan
CP-FG : Capstan-Frequency Generator
CP-F/R : Capstan-Forward/Reverse
CP-M : Capstan-Motor
CONV : Converter
CTL : Control
C-LAMP : Cassette Lamp
C-I LAMP : Cassette Indicator Lamp
CE : Chip Enable
$\overline{\mathrm{CE}}$: Not Chip Enable
CK : Clock
CL : Clear
CNT : Counter
CP R-R : Capstan Reverse Rotation
CS-1 : Cassette Switch 1
CS-2 : Cassette Switch 2

DAL : Delay-After Loading
DEMOD : Demodulator
DET : Detector
DL : Delay Line
DL-REV : During Reverse
DL-FWD : During Forward
DOC : Drop Out Compensator
DL-SL : During Slow
DL-$\overline{\mathrm{SS}}$: During Not Speed Search
DOP : Drop Out Pulse

EF : Emitter Follower
EMPHA : Emphasis
EQ : Equalizer
EE : Electronic-Electronic
ES : End Sensor

FE-H : Full Erase Head
FF : Fast Forward
FG : Frequency Generator
FL-SW : Front Loading SW
FLM : Front Loading Motor
F/R-SW : FF/Rewind Switch
F/R : Forward/Reverse
FS : Forward Search

G : Ground

HE : Hall Element
H-LED : Humidity-LED
H-SENS : Humidity-Sensor
HPF : High-Pass Filter

LIM : Limiter
LPF : Low-Pass Filter
LM : Loading Motor

MDA : Motor Drive Amplifier
MC : Mechanical Control
MIC : Microphone
MOD : Modulator

$\overline{\mathrm{N}}$: Not Normal

OPE : Operation
OSC : Oscillator
O-PWV : ON/OFF Command from Remote Decoder

PB : Play Back
PG : Pulse Generator
P/R-SW : P.B/REC-SW
PCB : Printed Circuit Board
PIC : Picture Control
P/R : Play/Record
PSC : Pulse swallow control
PWT-SET : Power TV Set
PWV : ON/OFF Command to B+ Switching Circuit

REC : Recording
REF : Reference
RIS : Record Inhibit Switch
REW : Rewind
REG : Regulator
RS : Reverse Search
REC-2 : Record Command for the Fine Editing Circuit
R-FS : Reel Drive Forward Search
R-P/R : Reel Drive Play/Record

S/AL : Stop After Load
SL : Slow
SLOK : Slow OK
S/P : Still/Pause
SS : Start Sensor
SRV-REC : Servo Record
$\overline{\mathrm{SS}}$: Not Speed Search
S-STOP : Stop Command
STOK : Still OK
STW : Stop Watch
SENS : Sensor
STBY : Stand By

TM : Take up Motor
T-REC : Timer-Record
T.P : Test Point
TR : Transistor
TU-P : Tuner-Power

UL : Unload

VS : Voltage Synthesizer
V.SYNC : Vertical Sync
VCO : Voltage Controlled Oscillator
VXO : Variable Crystal Oscillator

W/D : White/Dark

X'OSC : Crystal Oscillator

Y/C : Luminance/Chrominance

CHIP PARTS REPLACEMENT

CHIP PARTS REPLACEMENT

Some resistors, shorting jumpers (0Ω resistor), ceramic capacitors, transistors and diodes are chip parts which are used for certain circuit elements. When replacing these parts, note the cautions as follows.

Cautions:

A. Use fine tipped, well insulated soldering pencil (iron) about 30 watts and the tweezers.
B. Melting the solder, remove the Chip Parts carefully not to tear off the copper foil of the printed circuit board.
C. Discard removed chips; do not reuse them.
D. Do not apply heat for more than 3 seconds to the new chip Parts.
E. Avoid using a rubbing stroke when soldering.
F. Take care not to scratch when soldering, or damage the Chip Parts.
G. Supplementary cementing is not required.

1 Removal of chip Parts (Resistors, capacitors, etc.)

A. Grasp the part with tweezers. Melting the solder at both side alternately, remove the one side of the part with a twisting motion.
B. Melt the solder at the other side and remove the part.

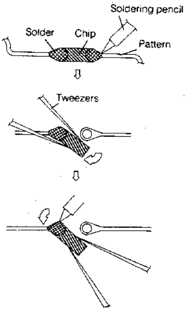

Soldering pencil
Solder
Chip
Pattern
Tweezers

Fig. 1

2 Removal of Chip Parts (Transistors)

A. Melting the solder of one lead, Lift the side of that lead upward.
B. Simultaneously melt the solder of the two remaining leads and lift the part to remove.

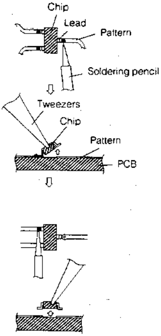

Chip
Lead
Pattern
Soldering pencil
Tweezers
Chip
Pattern
PCB

Fig. 2

3 Replacement

A. Presolder the contact points of the circuit pattern.
B. Press the part downward with tweezers and apply the soldering pencil as shown in the figure.

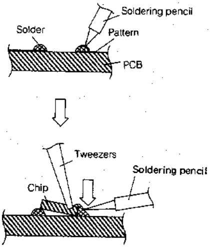
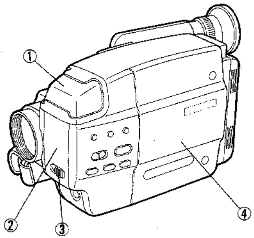
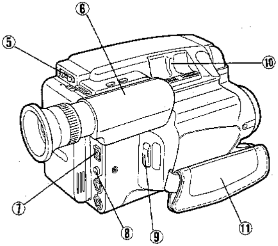

Soldering pencil
Solder
Pattern
PCB
Tweezers
Soldering pencil
Chip

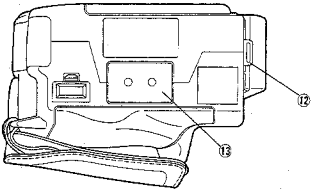
Fig. 3

PARTS LIST

1.Outer parts

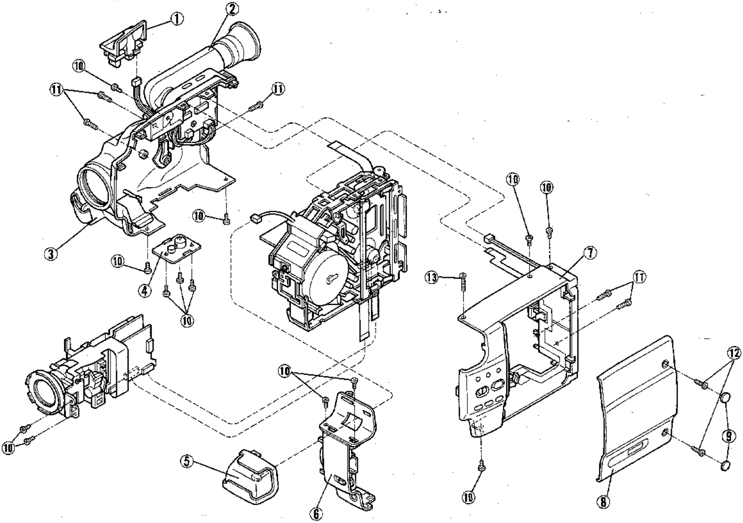






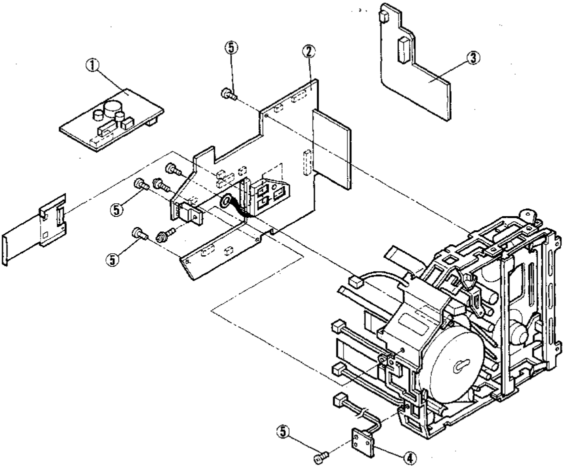
ITEM NO.	PARTS NO.	PARTS NAME	DESCRIPTION
1	485P018010	MICROPHONE UNIT	[1A, 1B, 1E]
1	485P017010	MICROPHONE UNIT	[4A, 4B, 4E]
2	701B233070	FRONT PANEL UNIT	[1A, 1B, 1E]
2	701B233030	FRONT PANEL UNIT	[4A, 4B, 4E]
3	734D542010	LENS COVER KNOB	
4	702B828050	CASSETTE HOUSING	[1A, 1B, 1E]
4	702B828040	CASSETTE HOUSING	[4A, 4B, 4E]
5	704C803010	POWER KNOB	
6	939P438030	EVF-UNIT	MC9009M-3
7	704C804010	EJECT KNOB	
8	704C802010	RELEASE BUTTON	
9	704C800010	TRIGGER BUTTON	
10	439P030010	ZOOM SWITCH	
11	772C016020	GRIP BELT	
12	768D143010	STRAP HOLDER	
13	769C004010	TRIPOD BASE	

2.Cabinet parts



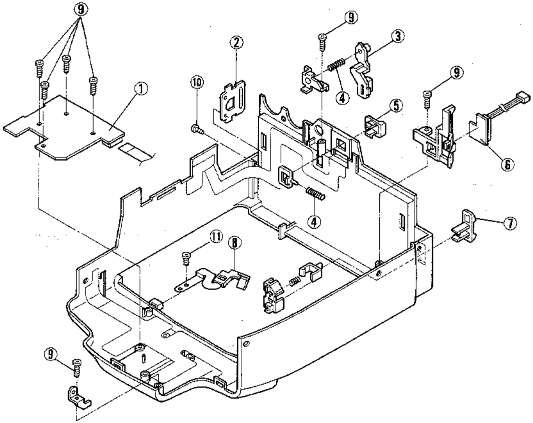
ITEM NO.	PARTS NO.	PARTS NAME	DESCRIPTION
1	439P030010	ZOOM SWITCH	
2	939P438030	EVF-UNIT	MC9009M-3
3	701B231080	CASE UNIT (L)	[1A, 1B, 1E]
3	701B231040	CASE UNIT (L)	[4A, 4B, 4E]
4	769C004010	TRIPOD BASE	
5	485P018010	MICROPHONE UNIT	[1A, 1B, 1E]
5	485P017010	MICROPHONE UNIT	[4A, 4B, 4E]
6	701B233070	FRONT PANEL UNIT	[1A, 1B, 1E]
6	701B233030	FRONT PANEL UNIT	[4A, 4B, 4E]
7	701B232050	CASE UNIT (R)	[1A, 1B, 1E]
7	701B232040	CASE UNIT (R)	[4A, 4B, 4E]
8	702B828050	CASSETTE HOUSING	[1A, 1B, 1E]
8	702B828040	CASSETTE HOUSING	[4A, 4B, 4E]
9	722D007030	SEAL	[1A, 1B, 1E]
9	722D007020	SEAL	PC T0.2 [4A, 4B, 4E]
10	669D372010	SCREW	M2X4
11	669D410010	SCREW (TAPPING)	M2X6
12	669D317030	SCREW	M2X0.4-5 (10P)
13	669D372040	SCREW	M2X10

3.Chassis Assembly Parts



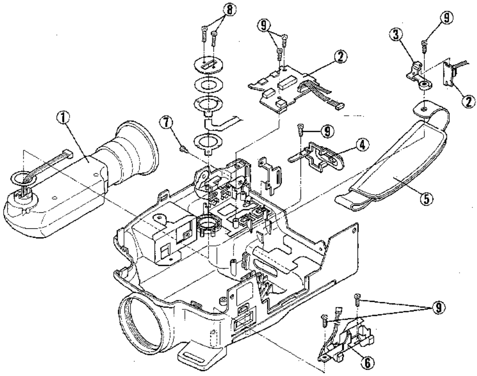
ITEM NO.	PARTS NO.	PARTS NAME	DESCRIPTION
1	928C719003	VTR-SUB PCB ASSY	
2	927B512001	VTR PCB ASSY	[1A, 1B, 1E]
2	927B512002	VTR PCB ASSY	[4A, 4B, 4E]
3	928C747002	REAR PCB ASSY	[1A, 1B, 1E]
3	928C747003	REAR PCB ASSY	[4A, 4B, 4E]
4	939P439020	CAMERA SW UNIT	FADE
5	669D372010	SCREW	M2X4

4.Case Assembly(Right side) Parts



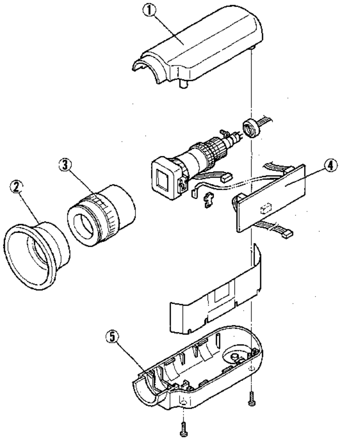
ITEM NO.	PARTS NO.	PARTS NAME	DESCRIPTION
1	939P439010	CAMERA SW UNIT	MENU +
2	768D143010	STRAP HOLDER	
3	704C802010	RELEASE BUTTON	
4	572D535010	EJECT SPRING	
5	704C804010	EJECT KNOB	
6	928C725001	POWER SW PCB ASSY	
7	704C803010	POWER KNOB	
8	621D767020	TAPE GUIDE	
9	669D435030	SCREW (TAPPING)	1.7X6
10	669D372010	SCREW	M2X4
11	669D435010	SCREW (TAPPING)	1.7X4

5.Case Assembly(Left side) Parts

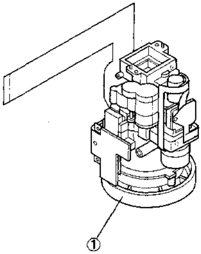


ITEM NO.	PARTS NO.	PARTS NAME	DESCRIPTION
1	939P438030	EVF-UNIT	MC9009M-3
2	928C746003	VTR SW PCB ASSY	
3	621C114010	RETAINER BELT	
4	704C800010	TRIGGER BUTTON	
5	772C016020	GRIP BELT	
6	701C026010	BACK-UP BATTERY UNIT	
7	669D372020	SCREW	M2X6 (10P)
8	669D322070	SCREW (TAPPING)	2X8
9	669D435030	SCREW (TAPPING)	1.7X6

6.EVF(Electronic View Finder) unit Parts

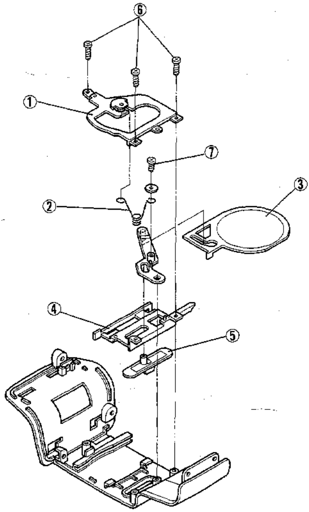


7.Camera unit Parts

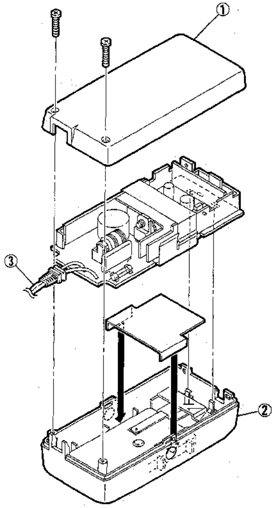


ITEM NO.	PARTS NO.	PARTS NAME	DESCRIPTION
		EVF UNIT	
1	701D073050	TOP CASE	EVF
2	765D039040	EYE CAP	EVF
3	409D009070	LENS ASSY(EVF)	
4	928D041030	EVF PCB ASSY	
5	701D073060	BOTTOM CASE	EVF
		LENS UNIT	
1	490P093010	LENS UNIT	T8D

8.Front panel Assembly Parts

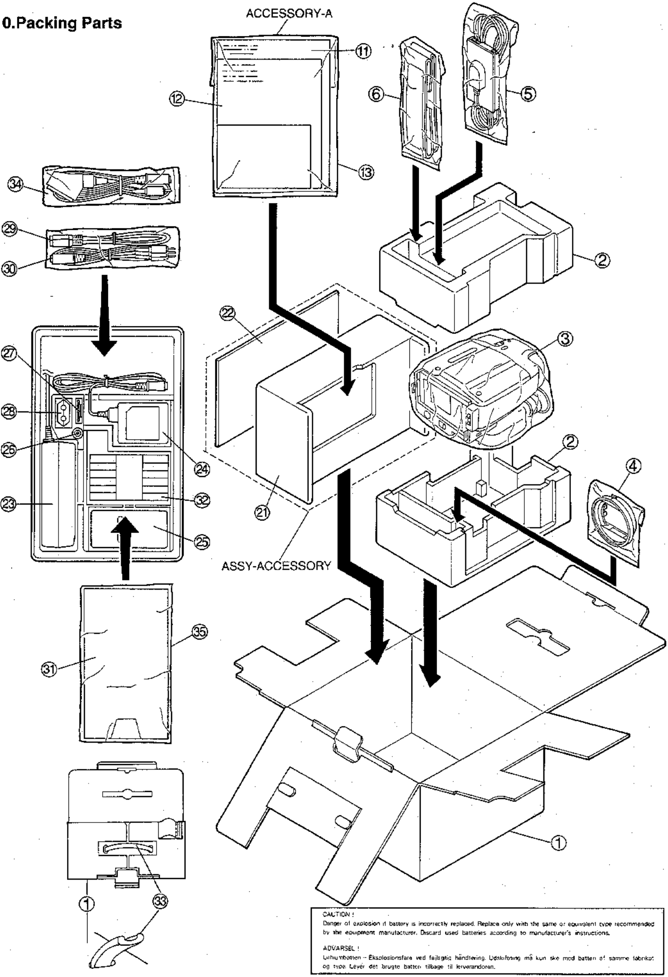


9.AC Power Adapter Parts



ITEM NO.	PARTS NO.	PARTS NAME	DESCRIPTION
		FRONT PANEL UNIT	
1	621C125010	LENS COVER HOLDER	
2	572D573010	LENS COVER SPRING	
3	761D718020	LENS COVER	[1A, 1B, 1E]
3	761D718010	LENS COVER	[4A, 4B, 4E]
4	621C149010	KNOB HOLDER	
5	734D542010	LENS COVER KNOB	
6	669D435030	SCREW (TAPPING)	1.7X6
7	669D435010	SCREW (TAPPING)	1.7X4
		AC POWER ADAPTER	
1	700D029050	BOTTOM CASE	[1A, 4A]
1	700D029040	BOTTOM CASE	[1B, 4B]
1	700D029030	BOTTOM CASE	[1E, 4E]
2	700D028030	TOP CASE	
3	242D410050	AC POWER CORD	[1A, 4A]
3	242D410040	AC POWER CORD	[1B, 4B]
3	242D410030	AC POWER CORD	[1E, 4E]
		Note : Broken AC power cord must be exchanged with a new original power cord.	

10.Packing Parts


ACCESSORY-A
⑪
⑫
⑥
⑤
⑬
㉞
㉙
㉚
②
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③
㉗
㉘
㉖
㉔
②
④
㉓
㉜
㉑
㉕
ASSY-ACCESSORY
㉟
㉛
①
①
㉝

CAUTION !
Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the equipment manufacturer. Discard used batteries according to manufacturer's instructions.

ADVARSEL !
Lithiumbatteri – Eksplosionsfare ved fejlagtig håndtering. Udskiftning må kun ske med batteri af samme fabrikat og type. Levér det brugte batteri tilbage til leverandøren.

ITEM NO.	PARTS NO.	PARTS NAME	DESCRIPTION
PACKING PARTS			
1	801C129090	PACKING CASE	[1A]
1	801C129080	PACKING CASE	[1B]
1	801C129070	PACKING CASE	[1E]
1	801C129060	PACKING CASE	[4A]
1	801C129050	PACKING CASE	[4B]
1	801C129040	PACKING CASE	[4E]
2	803A282010	PACKING CUSHION	
3	831D177070	PACKING BAG	
4	702C999010	ATTACHMENT RING	
5	939P437020	DC CABLE UNIT	
6	772P021020	SHOLDER BELT	
ACCESSORY – A			
11	872C042000	INSTRUCTION BOOK	ENGLISH [1A, 1B, 1E]
11	872C042010	INSTRUCTION BOOK	GERMAN [1E]
11	872C042020	INSTRUCTION BOOK	SPANISH [1E]
11	872C041070	INSTRUCTION BOOK	ENGLISH [4A, 4B, 4E]
11	872C041080	INSTRUCTION BOOK	GERMAN [4E]
11	872C041090	INSTRUCTION BOOK	SPANISH [4E]
12	851B635010	SHEET CAUTION	
13	831D181020	PACKING BAG	
ASSY – ACCESSORY			
21	803A283010	PACKING CUSHION	
22	801C130050	PACKING SHEET	[1A, 4A]
22	801C130040	PACKING SHEET	[1B, 4B]
22	801C130030	PACKING SHEET	[1E, 4E]
23	939P450030	AC ADAPTER	[1A, 4A]
23	939P450020	AC ADAPTER	[1B, 4B]
23	939P450010	AC ADAPTER	[1E, 4E]
24	295P291010	RF CONVERTER	DAR-M1A [1A, 4A]
24	295P290010	RF CONVERTER	DAR-M1EB [1B, 4B]
25	939P455010	BATTERY PACK	
26	----------	BATTERY	
27	283P035020	BACK UP BATTERY	Lithium battery CR2025
28	451C072010	AC JACK	[1E, 4E]
29	242D231030	CABLE	1.5M [1A, 1B, 4A, 4B]
30	243C111010	CABLE	[1A]
30	243C062010	AV CABLE	[4A]
31	908C137002	CASSETTE ADAPTER	
32	471P062010	C-VIDEO-CASSETTE	
33	829D094010	QUICK HAND	
34	831D252010	PACKING BAG	
35	831D252040	PACKING BAG	
36	246C139010	CABLE	[1B, 1E, 4B, 4E]

11. ELECTRICAL PARTS

INTEGRATED CIRCUITS

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION	
IC201	272P548010	IC	AN3348FBP	
IC2A1	272P672010	IC	M52351FP	
IC2AA	263P565010	IC	MN5179	
IC2AB	263P566010	IC	MN3110SA	
IC2AC	272P604010	IC	CXA1439M	
IC2AD	263P220010	IC	SC7SU04F	
IC2P1	272P749010	IC	TL8819F	
IC2R1	274P121010	IC	MB88346A	
IC2001	272P762010	IC	NJM2249M	
IC2002	272P546010	IC	MM1031XMR	
IC300	272P375010	IC	BA7757BK	
IC350	272P675010	IC	BA3308F	
IC3A0	272P541010	IC	AN3935NFHP	[4A, 4B, 4E]
IC3AA	272P700010	IC	AN2163FHP	
IC3AB	274P054010	IC	MN3819S	
IC3AC	274P053010	IC	MN3820S	
IC3AD	274P121010	IC	MB88346A	
IC3AE	274P121010	IC	MB88346A	
IC401	272P485020	IC	NJM2902V	
IC402	272P205040	IC	LM2903DB	
IC4AA	263P598010	IC	MN73033XRA	
IC4B0	272P540010	IC	VC5035	
IC4D0	272P542010	IC	LB1617M-TP-T1	
IC4G0	272P705010	IC	LM2904DB	
IC500	263P370010	IC	LC3564PML	[4A, 4B, 4E]
IC501	263P564010	IC	BU2707K	[4A, 4B, 4E]
IC502	272P673010	IC	AN2355AP	[4A, 4B, 4E]
IC503	272P447010	IC	NJM2235M	
IC504	272P366020	IC	LM311DB	[4A, 4B, 4E]
IC505	274P070010	IC	SN74HC08DB	
IC5A0	274P060010	IC	M37405M5-136FP	
IC5A1	263P440010	IC	S-8054HNM	
IC5A2	272P674010	IC	M5237ML	
IC5AA	274P001010	IC	M37450M8-470FP	
IC5AB	272P705010	IC	LM2904DB	
IC5AC	272P485010	IC	LM2902DB	
IC5AE	272P703010	IC	LM2901DB	
IC5D0	272P556010	IC	TA7291F(ER)	
IC5EA	263P427010	IC	S-29181F	
IC5FA	272P704010	IC	TB6503AF	
IC5GA	263P596020	IC	CF79104PM	[1A, 1B, 1E]
IC5GA	263P596030	IC	CF79114PM	[4A, 4B, 4E]
IC5LA	272P485010	IC	LM2902DB	
IC5RA	272P357010	IC	RST529C	
IC5ZA	272P358020	IC	TK10501M	
IC6A1	272P748010	IC	AN2465NFHP	
IC6AA	272P485010	IC	LM2902DB	[4A, 4B, 4E]
IC6AB	263P217010	IC	SC14S66F	[4A, 4B, 4E]
IC6AC	263P217010	IC	SC14S66F	[4A, 4B, 4E]
IC800	274P061010	IC	M37460M8-087FP	
IC801	263P373010	IC	S-81350HG-KD-T1	
IC802	263P375010	IC	S-80725AL-AN-T1	
IC803	263P440010	IC	S-8054HNM	
IC902	272P547010	IC	MB3782PF-G-BND	

TRANSISTORS

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION	
Q 202	260P854020	TRANSISTOR(C)	2SC4098-P	
Q 205	260P854020	TRANSISTOR(C)	2SC4098-P	
Q 221	260P877020	TRANSISTOR(C)	2SC4618-P	[4A, 4B, 4E]
Q 222	260P877020	TRANSISTOR(C)	2SC4618-P	[4A, 4B, 4E]
Q 223	260P877020	TRANSISTOR(C)	2SC4618-P	[4A, 4B, 4E]
Q 224	260P877020	TRANSISTOR(C)	2SC4618-P	[4A, 4B, 4E]
Q 225	260P877020	TRANSISTOR(C)	2SC4618-P	
Q 226	260P877020	TRANSISTOR(C)	2SC4618-P	
Q 227	260P877020	TRANSISTOR(C)	2SC4618-P	
Q 228	260P877020	TRANSISTOR(C)	2SC4618-P	
Q 291	260P859050	TRANSISTOR(C)	2SA1576-R	
Q 292	260P859050	TRANSISTOR(C)	2SA1576-R	
Q 294	260P859050	TRANSISTOR(C)	2SA1576-R	
Q 2A1	260P852010	TRANSISTOR(C)	FMG2/XN1213	
Q 2A3	260P857020	TRANSISTOR(C)	DTC144EU	
Q 2A4	260P857020	TRANSISTOR(C)	DTC144EU	
Q 2A6	260P854020	TRANSISTOR(C)	2SC4098-P	
Q 2A9	260P857020	TRANSISTOR(C)	DTC144EU	
Q 2AA	260P870010	TRANSISTOR(C)	2SA1610Y34	
Q 2AB	260P869010	TRANSISTOR(C)	2SC4176B35	
Q 2AC	260P870010	TRANSISTOR(C)	2SA1610Y34	
Q 2AD	260P869010	TRANSISTOR(C)	2SC4176B35	
Q 2AE	260P854030	TRANSISTOR(C)	2SC4098-Q	
Q 2AH	260P854030	TRANSISTOR(C)	2SC4098-Q	
Q 2AJ	260P867050	TRANSISTOR(C)	2SD1949	
Q 2AK	260P859050	TRANSISTOR(C)	2SA1576-R	
Q 2D0	260P854020	TRANSISTOR(C)	2SC4098-P	
Q 2D2	260P854020	TRANSISTOR(C)	2SC4098-P	
Q 2DA	260P854030	TRANSISTOR(C)	2SC4098-Q	
Q 2H0	260P854020	TRANSISTOR(C)	2SC4098-P	
Q 2H2	260P859050	TRANSISTOR(C)	2SA1576-R	
Q 2H3	260P854020	TRANSISTOR(C)	2SC4098-P	
Q 2H4	260P859050	TRANSISTOR(C)	2SA1576-R	
Q 2P0	260P854020	TRANSISTOR(C)	2SC4098-P	
Q 2P1	260P854020	TRANSISTOR(C)	2SC4098-P	
Q 2V0	260P861050	TRANSISTOR(C)	2SA1577A-Q	
Q 2V1	260P861050	TRANSISTOR(C)	2SA1577A-Q	
Q 2001	260P854030	TRANSISTOR(C)	2SC4098-Q	
Q 2002	260P854030	TRANSISTOR(C)	2SC4098-Q	
Q 2004	260P854020	TRANSISTOR(C)	2SC4098-P	
Q 2005	260P859050	TRANSISTOR(C)	2SA1576-R	
Q 2006	260P857020	TRANSISTOR(C)	DTC144EU	
Q 2007	260P859050	TRANSISTOR(C)	2SA1576-R	
Q 2008	260P854020	TRANSISTOR(C)	2SC4098-P	
Q 2009	260P854020	TRANSISTOR(C)	2SC4098-P	
Q 300	260P856010	TRANSISTOR(C)	DTA144EU	
Q 301	260P844030	TRANSISTOR(C)	XN1501	
Q 320	260P867060	TRANSISTOR(C)	2SD1949-R	
Q 321	260P861050	TRANSISTOR(C)	2SA1577A-Q	
Q 350	260P844010	TRANSISTOR(C)	FMW1	
Q 3A0	260P855060	TRANSISTOR(C)	2SC4081-S	[4A, 4B, 4E]
Q 3A1	260P855060	TRANSISTOR(C)	2SC4081-S	

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION	
Q 3AB	260P849010	TRANSISTOR(C)	IMZ1	
Q 3AC	260P849010	TRANSISTOR(C)	IMZ1	
Q 3AD	260P854030	TRANSISTOR(C)	2SC4098-Q	
Q 3AE	260P859050	TRANSISTOR(C)	2SA1576-R	
Q 3AF	260P849010	TRANSISTOR(C)	IMZ1	
Q 3AG	260P854030	TRANSISTOR(C)	2SC4098-Q	
Q 3AH	260P859050	TRANSISTOR(C)	2SA1576-R	
Q 3AJ	260P854030	TRANSISTOR(C)	2SC4098-Q	
Q 3AK	260P854030	TRANSISTOR(C)	2SC4098-Q	
Q 3AL	260P859050	TRANSISTOR(C)	2SA1576-R	
Q 3AM	260P849010	TRANSISTOR(C)	IMZ1	
Q 3AN	260P852010	TRANSISTOR(C)	FMG2/XN1213	
Q 3AP	260P852010	TRANSISTOR(C)	FMG2/XN1213	
Q 3AQ	260P857020	TRANSISTOR(C)	DTC144EU	
Q 3AR	260P849010	TRANSISTOR(C)	IMZ1	
Q 3AS	260P863010	TRANSISTOR(C)	IMT1	
Q 3AT	260P863010	TRANSISTOR(C)	IMT1	
Q 3AU	260P845010	TRANSISTOR(C)	IMX1	
Q 3AV	260P845010	TRANSISTOR(C)	IMX1	
Q 3AW	260P849010	TRANSISTOR(C)	IMZ1	
Q 3AX	260P854030	TRANSISTOR(C)	2SC4098-Q	
Q 3AY	260P854030	TRANSISTOR(C)	2SC4098-Q	
Q 3AZ	260P854030	TRANSISTOR(C)	2SC4098-Q	
Q 3BB	260P857020	TRANSISTOR(C)	DTC144EU	
Q 3BC	260P852010	TRANSISTOR(C)	FMG2/XN1213	[4A, 4B, 4E]
Q 3BD	260P857020	TRANSISTOR(C)	DTC144EU	[4A, 4B, 4E]
Q 3BE	260P849010	TRANSISTOR(C)	IMZ1	
Q 3BF	260P845010	TRANSISTOR(C)	IMX1	
Q 3BG	260P854030	TRANSISTOR(C)	2SC4098-Q	
Q 3BH	260P849010	TRANSISTOR(C)	IMZ1	
Q 3BJ	260P854030	TRANSISTOR(C)	2SC4098-Q	
Q 404	260P851010	TRANSISTOR(C)	IMD2/XN4312	
Q 406	260P857020	TRANSISTOR(C)	DTC144EU	
Q 407	260P859030	TRANSISTOR(C)	2SA1576-S	
Q 500	260P857020	TRANSISTOR(C)	DTC144EU	
Q 501	260P844030	TRANSISTOR(C)	XN1501	[4A, 4B, 4E]
Q 571	268P044020	PHOTO INTERRUPTER		
Q 572	268P044020	PHOTO INTERRUPTER		
Q 573	268P041010	PHOTO TRANSISTOR	PN147	
Q 5A0	260P857020	TRANSISTOR(C)	DTC144EU	
Q 5A1	260P855070	TRANSISTOR(C)	2SD1819A-Q	
Q 5A2	260P484020	TRANSISTOR	2SB942-P	
Q 5A3	260P856010	TRANSISTOR(C)	DTA144EU	
Q 5A4	260P855070	TRANSISTOR(C)	2SD1819A-Q	
Q 5AA	260P854020	TRANSISTOR(C)	2SC4098-P	
Q 5AB	260P858010	TRANSISTOR(C)	DTA114EU	
Q 5AC	260P845010	TRANSISTOR(C)	IMX1	
Q 5AD	260P857020	TRANSISTOR(C)	DTC144EU	
Q 5AE	260P853010	TRANSISTOR(C)	FMA2/XN1113	
Q 5AG	260P852010	TRANSISTOR(C)	FMG2/XN1213	
Q 5D0	260P857020	TRANSISTOR(C)	DTC144EU	
Q 5FA	260P859050	TRANSISTOR(C)	2SA1576-R	
Q 5FB	260P854030	TRANSISTOR(C)	2SC4098-Q	
Q 5FC	260P854030	TRANSISTOR(C)	2SC4098-Q	
Q 5FD	260P854030	TRANSISTOR(C)	2SC4098-Q	

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION	
Q 5FG	260P859050	TRANSISTOR(C)	2SA1576-R	
Q 5FJ	260P855090	TRANSISTOR(C)	2SD1819A-S	
Q 5FK	260P855090	TRANSISTOR(C)	2SD1819A-S	
Q 5FL	260P859090	TRANSISTOR(C)	2SB1218A-S	
Q 5GA	260P845010	TRANSISTOR(C)	IMX1	
Q 5KM	260P863010	TRANSISTOR(C)	IMT1	
Q 5LB	260P855050	TRANSISTOR(C)	2SC4081	
Q 5LC	260P858010	TRANSISTOR(C)	DTA114EU	
Q 6A1	260P852010	TRANSISTOR(C)	FMG2/XN1213	
Q 6A3	260P857020	TRANSISTOR(C)	DTC144EU	
Q 6A4	260P854020	TRANSISTOR(C)	2SC4098-P	
Q 6A5	260P856010	TRANSISTOR(C)	DTA144EU	
Q 6AA	260P845010	TRANSISTOR(C)	IMX1	[4A, 4B, 4E]
Q 6AB	260P855050	TRANSISTOR(C)	2SC4081	[4A, 4B, 4E]
Q 6AC	260P856010	TRANSISTOR(C)	DTA144EU	[4A, 4B, 4E]
Q 800	260P861060	TRANSISTOR(C)	2SA1577-R	
Q 801	260P864010	TRANSISTOR(C)	2SK209GR	
Q 802	260P857030	TRANSISTOR(C)	UN5213	
Q 904	260P701010	TRANSISTOR(C)	2SA1213-Y	
Q 905	260P701010	TRANSISTOR(C)	2SA1213-Y	
Q 906	260P701010	TRANSISTOR(C)	2SA1213-Y	

DIODES

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION	
D 201	264P841030	DIODE(C)	MA132WA	[4A, 4B, 4E]
D 202	264P841030	DIODE(C)	MA132WA	[4A, 4B, 4E]
D 203	264P841030	DIODE(C)	MA132WA	
D 204	264P841030	DIODE(C)	MA132WA	
D 205	264P841030	DIODE(C)	MA132WA	
D 206	264P814030	DIODE(C)	MA142WA	
D 207	264P814030	DIODE(C)	MA142WA	
D 2A0	264P828010	DIODE(C)	DAN202U	
D 2A1	264P814030	DIODE(C)	MA142WA	
D 2A3	264P843010	DIODE(C)	DA221/MA133	
D 2AA	264P837010	DIODE(C)	MA141K	
D 2AD	264P837010	DIODE(C)	MA141K	
D 2AE	264P837010	DIODE(C)	MA141K	
D 2AF	264P837010	DIODE(C)	MA141K	
D 2AG	264P837010	DIODE(C)	MA141K	
D 2AH	264P849010	DIODE(C)	MA728	
D 2AJ	264P848010	DIODE(C)	MA110	
D 2AK	264P837010	DIODE(C)	MA141K	
D 2AL	264P814030	DIODE(C)	MA142WA	
D 2J0	264P814030	DIODE(C)	MA142WA	
D 2P0	264P814030	DIODE(C)	MA142WA	
D 2000	264P814030	DIODE(C)	MA142WA	
D 2001	264P844050	DIODE(C)	RD 7.5UMB2	
D 2002	264P844050	DIODE(C)	RD 7.5UMB2	
D 2004	264P844050	DIODE(C)	RD 7.5UMB2	
D 2005	264P814030	DIODE(C)	MA142WA	
D 3A0	264P814030	DIODE(C)	MA142WA	
D 3AB	264P833010	DIODE(C)	ND411G-2	
D 500	264P845010	DIODE(C)	1SV223	[4A, 4B, 4E]
D 501	264P814030	DIODE(C)	MA142WA	
D 571	264P526010	LIGHT EMITTING DIODE	LN57	
D 5A0	264P828010	DIODE(C)	DAN202U	

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION	
D 5A1	264P814030	DIODE(C)	MA142WA	
D 5CA	264P828010	DIODE(C)	DAN202U	
D 5D0	264P828010	DIODE(C)	DAN202U	
D 5FA	264P603010	DIODE(C)	U1GWJ44	
D 5FB	264P603010	DIODE(C)	U1GWJ44	
D 5FC	264P603010	DIODE(C)	U1GWJ44	
D 5FD	264P603010	DIODE(C)	U1GWJ44	
D 5FE	264P814030	DIODE(C)	MA142WA	
D 5LA	264P814030	DIODE(C)	MA142WA	
D 6A0	264P828010	DIODE(C)	DAN202U	
D 6A1	264P814030	DIODE(C)	MA142WA	
D 6A2	264P828010	DIODE(C)	DAN202U	
D 6AA	264P828010	DIODE(C)	DAN202U	[4A, 4B, 4E]
D 700	264P814030	DIODE(C)	MA142WA	
D 701	264P814030	DIODE(C)	MA142WA	
D 702	264P814030	DIODE(C)	MA142WA	
D 703	264P814030	DIODE(C)	MA142WA	
D 800	264P847010	DIODE(C)	MA741WA	
D 801	264P846010	DIODE(C)	MA732	
D 802	264P830020	DIODE(C)	DA204U	
D 803	264P828010	DIODE(C)	DAN202U	
D 805	264P814030	DIODE(C)	MA142WA	
D 806	264P814030	DIODE(C)	MA142WA	
D 807	264P828010	DIODE(C)	DAN202U	
D 809	264P814030	DIODE(C)	MA142WA	
D 903	264P814030	DIODE(C)	MA142WA	
D 904	264P814030	DIODE(C)	MA142WA	
D 906	264P850010	DIODE(C)	MA720	
D 907	264P850010	DIODE(C)	MA720	
D 908	264P850010	DIODE(C)	MA720	

FILTERS

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION	
	499P019010	OPTICAL FILTER		
BPF3A0	409P620010	BAND PASS FILTER(C)	RZV-397N	[4A, 4B, 4E]
BPF3A1	409P621010	BAND PASS FILTER(C)	RZV-398N	[4A, 4B, 4E]
BPF6A1	409P552010	BAND PASS FILTER(C)	H355BSK-2042MYD	
CF800	299P148010	CERAMIC RESONATOR	KBR-4.19MWS	
DE2000	409P652010	DELAY EQUALIZER(C)		
FL400	299P161010	FILTER	AFZR72YM38A1	
LF2AA	409P700010	LOW PASS FILTER	PYV-811N	
LF3AA	409P703010	LOW PASS FILTER	RZV-55VN	
LF3AB	409P702010	LOW PASS FILTER	RXV-207N	
LF3AC	409P704010	LOW PASS FILTER	RZV-75PN	
LF3AE	409P701010	LOW PASS FILTER	RYV-80LN	
LF3AF	409P710010	LOW PASS FILTER	4FUS-TH354LAI-5938	
LF3AG	409P719010	LOW PASS FILTER(C)	4FUSTH354LAI5795	[4A, 4B, 4E]
LF3AH	409P701010	LOW PASS FILTER	RYV-80LN	
LF5AA	409P733010	LOW PASS FILTER(C)	4FUSTH354LAI5592	

DELAY LINES

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION	
DE2001	409P745010	DELAY EQUALIZER		
DL6A1	337P185010	DELAY LINE		

COILS

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION	
L 200	325C147080	COIL(C)	180μH-J	
L 201	325C222050	COIL(C)	100μH-J	
L 202	325C221080	COIL(C)	27μH-J	
L 203	325C222020	COIL(C)	56μH-J	
L 204	325C147050	COIL(C)	100μH-J	[4A, 4B, 4E]
L 292	325C146030	COIL(C)	10μH-J	
L 293	325C146000	COIL(C)	5.6μH-J	
L 2A4	325C183010	COIL(C)	330μH-M	
L 2A5	325C222050	COIL(C)	100μH-J	
L 2AB	325C141050	COIL(C)	15μH-K	
L 2AC	325C240030	COIL(C)	1.5μH-M	
L 2AD	325C141070	COIL(C)	22μH-K	
L 2AF	325C241070	COIL(C)	22μH-K	
L 2D1	325C243000	COIL(C)	270μH-K	
L 2D2	325C221090	COIL(C)	33μH-J	
L 2H0	325C221090	COIL(C)	33μH-J	
L 2H1	325C222020	COIL(C)	56μH-J	
L 2H2	325C221070	COIL(C)	22μH-J	
L 2P1	325C222050	COIL(C)	100μH-J	
L 2000	325C141060	COIL(C)	18μH-K	
L 300	325C191050	COIL(C)	15000μH-J	[1A, 1B, 1E]
L 320	409P695010	AUDIO BIAS OSC		
L 321	325C242070	COIL(C)	150μH-K	
L 3A0	325C242050	COIL(C)	100μH-K	[4A, 4B, 4E]
L 3AA	325C241070	COIL(C)	22μH-K	
L 3AD	325C241070	COIL(C)	22μH-K	
L 3AE	325C241070	COIL(C)	22μH-K	
L 3AF	325C241070	COIL(C)	22μH-K	
L 3AG	325C241070	COIL(C)	22μH-K	
L 3AH	325C241030	COIL(C)	10μH-K	
L 3AJ	325C242020	COIL(C)	56μH-K	
L 3AK	325C242020	COIL(C)	56μH-K	
L 500	325C141030	COIL(C)	10μH-K	[4A, 4B, 4E]
L 501	325C141030	COIL(C)	10μH-K	[4A, 4B, 4E]
L 502	325C181080	COIL(C)	27μH-K	[4A, 4B, 4E]
L 503	325C141010	COIL(C)	6.8μH-M	
L 5AA	325C242020	COIL(C)	56μH-K	
L 5AD	325C242040	COIL(C)	82μH-K	
L 6A0	325C242090	COIL(C)	220μH-K	
L 6A1	325C221050	COIL(C)	15μH-J	
L 6A3	325C146050	COIL(C)	15μH-J	
L 6A4	325C141020	COIL(C)	8.2μH-M	
L 6A5	325C147090	COIL(C)	220μH-J	
L 6A6	325C147070	COIL(C)	150μH-J	
L 800	325C181050	COIL(C)	15μH-K	
L 902	351P087010	CHOKE COIL	CD54 22MHz	
L 903	351P087010	CHOKE COIL	CD54 22MHz	
L 904	351P088010	CHOKE COIL	CDR74 150MHz	
L 905	351P088010	CHOKE COIL	CDR74 150MHz	
L 906	325C242050	COIL(C)	100μH-K	
L 907	325C242050	COIL(C)	100μH-K	
L 908	351P087020	CHOKE COIL	CD54 120MHz	

TRANSFORMERS

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
T 901	409P689010	TRANSFORMER	

VARIABLE RESISTORS

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
VR2A0	127C261010	VR-SEMIFIXED(C)	0.05W B50KΩ
VR2A1	127C261010	VR-SEMIFIXED(C)	0.05W B50KΩ
VR2AA	127C221030	VR-SEMIFIXED(C)	1/10W B200KΩ-N
VR320	127C261020	VR-SEMIFIXED(C)	0.05W B100KΩ
VR3A0	127C260080	VR-SEMIFIXED(C)	0.05W B10KΩ [4A, 4B, 4E]
VR3A1	127C260060	VR-SEMIFIXED(C)	0.05W B3KΩ [4A, 4B, 4E]
VR3AA	127C220060	VR-SEMIFIXED(C)	1/10W B3KΩ-N
VR3AB	127C220070	VR-SEMIFIXED(C)	1/10W B5KΩ-N
VR3AC	127C220070	VR-SEMIFIXED(C)	1/10W B5KΩ-N
VR3AD	127C220060	VR-SEMIFIXED(C)	1/10W B3KΩ-N
VR3AE	127C220090	VR-SEMIFIXED(C)	1/10W B20KΩ-N
VR3C0	127C260080	VR-SEMIFIXED(C)	0.05W B10KΩ [4A, 4B, 4E]
VR3C1	127C260060	VR-SEMIFIXED(C)	0.05W B3KΩ [4A, 4B, 4E]
VR3D0	127C260070	VR-SEMIFIXED(C)	0.05W B5KΩ [4A, 4B, 4E]
VR5A0	127C261020	VR-SEMIFIXED(C)	0.05W B100KΩ
VR5A1	127C260060	VR-SEMIFIXED(C)	0.05W B3KΩ
VR902	127C260050	VR-SEMIFIXED(C)	0.05W B2KΩ

RESISTORS

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
R 200	103P502030	RESISTOR(C)	1/20W 680Ω-J
R 201	103P709050	METAL RESISTOR(C)	1/16W 0Ω
R 202	103P702050	METAL RESISTOR(C)	1/16W 1KΩ-J
R 203	103P704030	METAL RESISTOR(C)	1/16W 33KΩ-J
R 204	103P704000	METAL RESISTOR(C)	1/16W 18KΩ-J
R 205	103P702080	METAL RESISTOR(C)	1/16W 1.8KΩ-J
R 206	103P702050	METAL RESISTOR(C)	1/16W 1KΩ-J
R 208	103P702050	METAL RESISTOR(C)	1/16W 1KΩ-J
R 209	103P701070	METAL RESISTOR(C)	1/16W 220Ω-J
R 211	103P701030	METAL RESISTOR(C)	1/16W 100Ω-J
R 212	103P702090	METAL RESISTOR(C)	1/16W 2.2KΩ-J
R 213	103P508040	RESISTOR(C)	1/20W 2.2Ω-K
R 214	103P508040	RESISTOR(C)	1/20W 2.2Ω-K
R 216	103P509050	RESISTOR(C)	0Ω RM1608 [1A, 1B, 1E]
R 216	103P501060	RESISTOR(C)	1/20W 180Ω-J [4A, 4B, 4E]
R 217	103P700010	METAL RESISTOR(C)	1/16W 10Ω-J [4A, 4B, 4E]
R 219	103P702000	METAL RESISTOR(C)	1/16W 390Ω-J [4A, 4B, 4E]
R 220	103P702000	METAL RESISTOR(C)	1/16W 390Ω-J [4A, 4B, 4E]
R 221	103P509050	RESISTOR(C)	0Ω RM1608 [1A, 1B, 1E]
R 221	103P501060	RESISTOR(C)	1/20W 180Ω-J [4A, 4B, 4E]
R 222	103P509050	RESISTOR(C)	0Ω RM1608 [1A, 1B, 1E]
R 222	103P501070	RESISTOR(C)	1/20W 220Ω-J [4A, 4B, 4E]
R 223	103P702040	METAL RESISTOR(C)	1/16W 820Ω-J
R 224	103P500010	RESISTOR(C)	1/20W 10Ω-J [4A, 4B, 4E]
R 225	103P702000	METAL RESISTOR(C)	1/16W 390Ω-J [4A, 4B, 4E]
R 226	103P702000	METAL RESISTOR(C)	1/16W 390Ω-J [4A, 4B, 4E]
R 227	103P509050	RESISTOR(C)	0Ω RM1608 [1A, 1B, 1E]
R 227	103P501050	RESISTOR(C)	1/20W 150Ω-J [4A, 4B, 4E]
R 228	103P703000	METAL RESISTOR(C)	1/16W 2.7KΩ-J
R 229	103P702000	METAL RESISTOR(C)	1/16W 390Ω-J
R 230	103P702000	METAL RESISTOR(C)	1/16W 390Ω-J
R 231	103P702090	METAL RESISTOR(C)	1/16W 2.2KΩ-J
R 232	103P700010	METAL RESISTOR(C)	1/16W 10Ω-J
R 233	103P703000	METAL RESISTOR(C)	1/16W 2.7KΩ-J
R 234	103P702000	METAL RESISTOR(C)	1/16W 390Ω-J
R 235	103P702090	METAL RESISTOR(C)	1/16W 2.2KΩ-J
R 236	103P702000	METAL RESISTOR(C)	1/16W 390Ω-J
R 237	103P702000	METAL RESISTOR(C)	1/16W 390Ω-J
R 238	103P702000	METAL RESISTOR(C)	1/16W 390Ω-J
R 239	103P703000	METAL RESISTOR(C)	1/16W 2.7KΩ-J
R 240	103P702090	METAL RESISTOR(C)	1/16W 2.2KΩ-J
R 241	103P700010	METAL RESISTOR(C)	1/16W 10Ω-J
R 242	103P700010	METAL RESISTOR(C)	1/16W 10Ω-J
R 243	103P700010	METAL RESISTOR(C)	1/16W 10Ω-J
R 244	103P702000	METAL RESISTOR(C)	1/16W 390Ω-J
R 245	103P703000	METAL RESISTOR(C)	1/16W 2.7KΩ-J
R 246	103P702090	METAL RESISTOR(C)	1/16W 2.2KΩ-J
R 247	103P702000	METAL RESISTOR(C)	1/16W 390Ω-J
R 248	103P702020	METAL RESISTOR(C)	1/16W 560Ω-J
R 249	103P703040	METAL RESISTOR(C)	1/16W 5.6KΩ-J
R 250	103P702070	METAL RESISTOR(C)	1/16W 1.5KΩ-J
R 251	103P508040	RESISTOR(C)	1/20W 2.2Ω-K
R 252	103P508040	RESISTOR(C)	1/20W 2.2Ω-K
R 253	103P508040	RESISTOR(C)	1/20W 2.2Ω-K
R 254	103P508040	RESISTOR(C)	1/20W 2.2Ω-K
R 255	103P701070	METAL RESISTOR(C)	1/16W 220Ω-J
R 256	103P508040	RESISTOR(C)	1/20W 2.2Ω-K [4A, 4B, 4E]
R 257	103P508040	RESISTOR(C)	1/20W 2.2Ω-K [4A, 4B, 4E]
R 258	103P508040	RESISTOR(C)	1/20W 2.2Ω-K
R 259	103P508040	RESISTOR(C)	1/20W 2.2Ω-K
R 260	103P409050	RESISTOR(C)	1/10W 0Ω [1A, 1B, 1E]
R 261	103P509050	RESISTOR(C)	0Ω RM1608 [1A, 1B, 1E]
R 263	103P509050	RESISTOR(C)	0Ω RM1608 [1A, 1B, 1E]
R 264	103P509050	RESISTOR(C)	0Ω RM1608 [1A, 1B, 1E]
R 265	103P509050	RESISTOR(C)	0Ω RM1608 [1A, 1B, 1E]
R 266	103P409050	RESISTOR(C)	1/10W 0Ω [1A, 1B, 1E]
R 267	103P409050	RESISTOR(C)	1/10W 0Ω [1A, 1B, 1E]
R 268	103P509050	RESISTOR(C)	0Ω RM1608 [1A, 1B, 1E]
R 269	103P509050	RESISTOR(C)	0Ω RM1608 [1A, 1B, 1E]
R 270	103P509050	RESISTOR(C)	0Ω RM1608 [1A, 1B, 1E]
R 271	103P509050	RESISTOR(C)	0Ω RM1608 [1A, 1B, 1E]
R 273	103P409050	RESISTOR(C)	1/10W 0Ω [1A, 1B, 1E]
R 275	103P703040	METAL RESISTOR(C)	1/16W 5.6KΩ-J [4A, 4B, 4E]
R 279	103P702040	METAL RESISTOR(C)	1/16W 820Ω-J [4A, 4B, 4E]
R 289	103P501010	RESISTOR(C)	1/20W 68Ω-J
R 290	103P502020	RESISTOR(C)	1/20W 560Ω-J
R 291	103P503070	RESISTOR(C)	1/20W 10KΩ-J
R 292	103P503090	RESISTOR(C)	1/20W 15KΩ-J
R 293	103P501060	RESISTOR(C)	1/20W 180Ω-J
R 294	103P501090	RESISTOR(C)	1/20W 330Ω-J
R 295	103P501010	RESISTOR(C)	1/20W 68Ω-J
R 296	103P508040	RESISTOR(C)	1/20W 2.2Ω-K
R 297	103P508040	RESISTOR(C)	1/20W 2.2Ω-K
R 298	103P504070	RESISTOR(C)	1/20W 68KΩ-J
R 2A5	103P703070	METAL RESISTOR(C)	1/16W 10KΩ-J
R 2A6	103P703070	METAL RESISTOR(C)	1/16W 10KΩ-J

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
R 2A7	103P504060	RESISTOR(C)	1/20W 56KΩ-J
R 2A9	103P704050	METAL RESISTOR(C)	1/16W 47KΩ-J
R 2AA	103P493080	METAL RESISTOR(C)	1/16W 3.6KΩ-F
R 2AB	103P495080	METAL RESISTOR(C)	1/16W 24KΩ-F
R 2AC	103P506010	RESISTOR(C)	1/20W 1MΩ-J
R 2AD	103P502030	RESISTOR(C)	1/20W 680Ω-J
R 2AE	103P502040	RESISTOR(C)	1/20W 820Ω-J
R 2AF	103P506010	RESISTOR(C)	1/20W 1MΩ-J
R 2AG	103P502020	RESISTOR(C)	1/20W 560Ω-J
R 2AH	103P502020	RESISTOR(C)	1/20W 560Ω-J
R 2AJ	103P506010	RESISTOR(C)	1/20W 1MΩ-J
R 2AK	103P502040	RESISTOR(C)	1/20W 820Ω-J
R 2AL	103P501040	RESISTOR(C)	1/20W 120Ω-J
R 2AM	103P501040	RESISTOR(C)	1/20W 120Ω-J
R 2AN	103P509050	RESISTOR(C)	0Ω RM1608
R 2AQ	103P509050	RESISTOR(C)	0Ω RM1608
R 2AR	103P501030	RESISTOR(C)	1/20W 100Ω-J
R 2AS	103P501030	RESISTOR(C)	1/20W 100Ω-J
R 2AU	103P502090	RESISTOR(C)	1/20W 2.2KΩ-J
R 2AV	103P502010	RESISTOR(C)	1/20W 470Ω-J
R 2B1	103P492050	METAL RESISTOR(C)	1/16W 1.0KΩ-F
R 2B2	103P493070	METAL RESISTOR(C)	1/16W 3.3KΩ-F
R 2B3	103P504030	RESISTOR(C)	1/20W 33KΩ-J
R 2B4	103P504010	RESISTOR(C)	1/20W 22KΩ-J
R 2B5	103P493050	METAL RESISTOR(C)	1/16W 2.7KΩ-F
R 2B6	103P492010	METAL RESISTOR(C)	1/16W 680Ω-F
R 2B7	103P702010	METAL RESISTOR(C)	1/16W 470Ω-J
R 2B8	103P701030	METAL RESISTOR(C)	1/16W 100Ω-J
R 2B9	103P503040	RESISTOR(C)	1/20W 5.6KΩ-J
R 2BA	103P501020	RESISTOR(C)	1/20W 82Ω-J
R 2BB	103P501070	RESISTOR(C)	1/20W 220Ω-J
R 2BC	103P501070	RESISTOR(C)	1/20W 220Ω-J
R 2BD	103P503050	RESISTOR(C)	1/20W 6.8KΩ-J
R 2BE	103P500080	RESISTOR(C)	1/20W 39Ω-J
R 2BF	103P501070	RESISTOR(C)	1/20W 220Ω-J
R 2BG	103P501070	RESISTOR(C)	1/20W 220Ω-J
R 2BJ	103P506010	RESISTOR(C)	1/20W 1MΩ-J
R 2BK	103P504030	RESISTOR(C)	1/20W 33KΩ-J
R 2BN	103P501060	RESISTOR(C)	1/20W 180Ω-J
R 2BP	103P409050	RESISTOR(C)	1/10W 0Ω
R 2C0	103P704050	METAL RESISTOR(C)	1/16W 47KΩ-J [1B, 4A]
R 2C1	103P509050	RESISTOR(C)	0Ω RM1608
R 2C3	103P704010	METAL RESISTOR(C)	1/16W 22KΩ-J
R 2C4	103P504010	RESISTOR(C)	1/20W 22KΩ-J [1A, 1B, 1E, 4B, 4E]
R 2C4	103P503090	RESISTOR(C)	1/20W 15KΩ-J [4A]
R 2C5	103P508040	RESISTOR(C)	1/20W 2.2Ω-K
R 2C6	103P508040	RESISTOR(C)	1/20W 2.2Ω-K
R 2C7	103P508040	RESISTOR(C)	1/20W 2.2Ω-K
R 2C8	103P508040	RESISTOR(C)	1/20W 2.2Ω-K
R 2CA	103P509050	RESISTOR(C)	0Ω RM1608
R 2CB	103P503010	RESISTOR(C)	1/20W 3.3KΩ-J
R 2CC	103P502050	RESISTOR(C)	1/20W 1KΩ-J
R 2CD	103P501030	RESISTOR(C)	1/20W 100Ω-J
R 2CE	103P502090	RESISTOR(C)	1/20W 2.2KΩ-J

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
R 2CF	103P503000	RESISTOR(C)	1/20W 2.7KΩ-J
R 2CG	103P501030	RESISTOR(C)	1/20W 100Ω-J
R 2D0	103P703000	METAL RESISTOR(C)	1/16W 2.7KΩ-J
R 2D1	103P701030	METAL RESISTOR(C)	1/16W 100Ω-J
R 2D2	103P702010	METAL RESISTOR(C)	1/16W 470Ω-J
R 2D3	103P702010	METAL RESISTOR(C)	1/16W 470Ω-J [1A, 1B, 1E]
R 2D3	103P702020	METAL RESISTOR(C)	1/16W 560Ω-J [4A, 4B, 4E]
R 2D4	103P702040	METAL RESISTOR(C)	1/16W 820Ω-J
R 2D5	103P704030	METAL RESISTOR(C)	1/16W 33KΩ-J
R 2D6	103P704000	METAL RESISTOR(C)	1/16W 18KΩ-J
R 2D7	103P508040	RESISTOR(C)	1/20W 2.2Ω-K
R 2D8	103P508040	RESISTOR(C)	1/20W 2.2Ω-K
R 2DA	103P503040	RESISTOR(C)	1/20W 5.6KΩ-J
R 2DB	103P501010	RESISTOR(C)	1/20W 68Ω-J
R 2DC	103P509050	RESISTOR(C)	0Ω RM1608
R 2DF	103P500030	METAL RESISTOR(C)	1/16W 15Ω-J
R 2DG	103P500030	METAL RESISTOR(C)	1/16W 15Ω-J
R 2DH	103P501090	RESISTOR(C)	1/20W 330Ω-J
R 2E0	103P702060	METAL RESISTOR(C)	1/16W 1.2KΩ-J
R 2E1	103P702090	METAL RESISTOR(C)	1/16W 2.2KΩ-J
R 2E3	103P701030	METAL RESISTOR(C)	1/16W 100Ω-J
R 2E4	103P701030	METAL RESISTOR(C)	1/16W 100Ω-J
R 2E5	103P504050	RESISTOR(C)	1/20W 47KΩ-J
R 2G5	103P704060	METAL RESISTOR(C)	1/16W 56KΩ-J
R 2G6	103P702050	METAL RESISTOR(C)	1/16W 1KΩ-J
R 2H0	103P703030	METAL RESISTOR(C)	1/16W 4.7KΩ-J
R 2H1	103P703020	METAL RESISTOR(C)	1/16W 3.9KΩ-J
R 2H2	103P702050	METAL RESISTOR(C)	1/16W 1KΩ-J
R 2H3	103P702020	METAL RESISTOR(C)	1/16W 560Ω-J
R 2H4	103P702040	METAL RESISTOR(C)	1/16W 820Ω-J [1A, 1E, 4B, 4E]
R 2H4	103P702080	METAL RESISTOR(C)	1/16W 1.8KΩ-J [1B, 4A]
R 2H6	103P702050	METAL RESISTOR(C)	1/16W 1KΩ-J
R 2H7	103P702050	METAL RESISTOR(C)	1/16W 1KΩ-J
R 2H8	103P702090	METAL RESISTOR(C)	1/16W 2.2KΩ-J
R 2H9	103P702040	METAL RESISTOR(C)	1/16W 820Ω-J
R 2L0	103P702050	METAL RESISTOR(C)	1/16W 1KΩ-J
R 2P0	103P502070	RESISTOR(C)	1/20W 1.5KΩ-J
R 2P1	103P493020	METAL RESISTOR(C)	1/16W 2KΩ-F
R 2P2	103P491080	METAL RESISTOR(C)	1/16W 510Ω-F
R 2P3	103P702050	METAL RESISTOR(C)	1/16W 1KΩ-J
R 2P4	103P701030	METAL RESISTOR(C)	1/16W 100Ω-J
R 2P5	103P508040	RESISTOR(C)	1/20W 2.2Ω-K
R 2P6	103P508040	RESISTOR(C)	1/20W 2.2Ω-K
R 2P7	103P504070	RESISTOR(C)	1/20W 68KΩ-J
R 2P8	103P501030	RESISTOR(C)	1/20W 100Ω-J
R 2R0	103P508040	RESISTOR(C)	1/20W 2.2Ω-K
R 2R1	103P508040	RESISTOR(C)	1/20W 2.2Ω-K
R 2V0	103P702080	METAL RESISTOR(C)	1/16W 1.8KΩ-J
R 2V1	103P703030	METAL RESISTOR(C)	1/16W 4.7KΩ-J
R 2V2	103P702080	METAL RESISTOR(C)	1/16W 1.8KΩ-J
R 2V3	103P703030	METAL RESISTOR(C)	1/16W 4.7KΩ-J
R 2000	103P503070	RESISTOR(C)	1/20W 10KΩ-J
R 2001	103P504010	RESISTOR(C)	1/20W 22KΩ-J
R 2002	103P492010	METAL RESISTOR(C)	1/16W 680Ω-F
R 2003	103P492010	METAL RESISTOR(C)	1/16W 680Ω-F

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
R 2004	103P492040	RESISTOR(C)	1/16W 910Ω-F
R 2005	103P502050	RESISTOR(C)	1/20W 1KΩ-J
R 2006	103P509090	RESISTOR(C)	1/20W 75Ω-J
R 2007	103P508040	RESISTOR(C)	1/20W 2.2Ω-K
R 2008	103P508040	RESISTOR(C)	1/20W 2.2Ω-K
R 2009	103P502030	RESISTOR(C)	1/20W 680Ω-J [4A, 4B, 4E]
R 2010	103P502030	RESISTOR(C)	1/20W 680Ω-J
R 2011	103P504000	RESISTOR(C)	1/20W 18KΩ-J
R 2012	103P496000	METAL RESISTOR(C)	1/16W 30KΩ-F
R 2015	103P501030	RESISTOR(C)	1/20W 100Ω-J
R 2016	103P509050	RESISTOR(C)	0Ω RM1608 [1A, 1B, 1E]
R 2017	103P501030	RESISTOR(C)	1/20W 100Ω-J
R 2018	103P495030	METAL RESISTOR(C)	1/16W 15KΩ-F
R 2019	103P502050	RESISTOR(C)	1/20W 1KΩ-J
R 2020	109P117010	FUSE	0.025-M(3.15A)
R 2021	103P493070	METAL RESISTOR(C)	1/16W 3.3KΩ-F
R 2022	103P501030	RESISTOR(C)	1/20W 100Ω-J
R 2023	103P502030	RESISTOR(C)	1/20W 680Ω-J
R 2024	103P502050	RESISTOR(C)	1/20W 1KΩ-J
R 2025	103P502070	RESISTOR(C)	1/20W 1.5KΩ-J
R 2026	103P503000	RESISTOR(C)	1/20W 2.7KΩ-J
R 2027	103P503040	RESISTOR(C)	1/20W 5.6KΩ-J
R 2028	103P501030	RESISTOR(C)	1/20W 100Ω-J
R 2029	103P503080	RESISTOR(C)	1/20W 12KΩ-J
R 2030	103P504090	RESISTOR(C)	1/20W 100KΩ-J
R 2031	103P492060	METAL RESISTOR(C)	1/16W 1.1KΩ-F
R 2032	103P503070	RESISTOR(C)	1/20W 10KΩ-J
R 2033	103P502050	RESISTOR(C)	1/20W 1KΩ-J
R 300	103P702090	METAL RESISTOR(C)	1/16W 2.2KΩ-J
R 301	103P703030	METAL RESISTOR(C)	1/16W 4.7KΩ-J
R 302	103P704000	METAL RESISTOR(C)	1/16W 18KΩ-J
R 303	103P701090	METAL RESISTOR(C)	1/16W 330Ω-J [1A, 1E]
R 303	103P702010	METAL RESISTOR(C)	1/16W 470Ω-J [1B, 4A]
R 303	103P702000	METAL RESISTOR(C)	1/16W 390Ω-J [4B, 4E]
R 304	103P703050	METAL RESISTOR(C)	1/16W 6.8KΩ-J
R 306	103P701070	METAL RESISTOR(C)	1/16W 220Ω-J [1A, 1B, 1E]
R 307	103P701090	METAL RESISTOR(C)	1/16W 330Ω-J [1A, 1B, 1E]
R 308	103P500010	RESISTOR(C)	1/20W 10Ω-J
R 309	103P704010	METAL RESISTOR(C)	1/16W 22KΩ-J
R 310	103P701040	METAL RESISTOR(C)	1/16W 120Ω-J
R 311	103P705000	METAL RESISTOR(C)	1/16W 120KΩ-J
R 312	103P703040	METAL RESISTOR(C)	1/16W 5.6KΩ-J
R 313	103P703010	METAL RESISTOR(C)	1/16W 3.3KΩ-J
R 314	103P503090	RESISTOR(C)	1/20W 15KΩ-J
R 315	103P503010	RESISTOR(C)	1/20W 3.3KΩ-J
R 316	103P705000	METAL RESISTOR(C)	1/16W 120KΩ-J
R 317	103P705000	METAL RESISTOR(C)	1/16W 120KΩ-J [4A, 4B, 4E]
R 318	103P503020	RESISTOR(C)	1/20W 3.9KΩ-J [4A, 4B, 4E]
R 318	103P492060	METAL RESISTOR(C)	1/16W 1.1KΩ-F [1A, 1B, 1E]
R 319	103P709050	METAL RESISTOR(C)	1/16W 0Ω [1A, 1B, 1E]
R 320	103P508040	RESISTOR(C)	1/20W 2.2Ω-K
R 321	103P508040	RESISTOR(C)	1/20W 2.2Ω-K
R 322	103P703050	METAL RESISTOR(C)	1/16W 6.8KΩ-J
R 323	103P503000	RESISTOR(C)	1/20W 2.7KΩ-J
R 324	103P502090	RESISTOR(C)	1/20W 2.2KΩ-J
R 325	103P502000	RESISTOR(C)	1/20W 390Ω-J
R 350	103P703070	METAL RESISTOR(C)	1/16W 10KΩ-J [1A, 1E, 4B, 4E]
R 350	103P702090	METAL RESISTOR(C)	1/16W 2.2KΩ-J [1B, 4A]
R 351	103P702090	METAL RESISTOR(C)	1/16W 2.2KΩ-J [4A]
R 351	103P703070	METAL RESISTOR(C)	1/16W 10KΩ-J [4B, 4E]
R 352	103P703070	METAL RESISTOR(C)	1/16W 10KΩ-J [1A, 1B, 1E]
R 353	103P709050	METAL RESISTOR(C)	1/16W 0Ω [1A, 1B, 1E]
R 354	103P703060	METAL RESISTOR(C)	1/16W 8.2KΩ-J
R 355	103P703060	METAL RESISTOR(C)	1/16W 8.2KΩ-J [4A, 4B, 4E]
R 356	103P704050	METAL RESISTOR(C)	1/16W 47KΩ-J
R 357	103P704050	METAL RESISTOR(C)	1/16W 47KΩ-J [4A, 4B, 4E]
R 358	103P704050	METAL RESISTOR(C)	1/16W 47KΩ-J
R 359	103P704050	METAL RESISTOR(C)	1/16W 47KΩ-J [4A, 4B, 4E]
R 360	103P703020	METAL RESISTOR(C)	1/16W 3.9KΩ-J
R 361	103P703020	METAL RESISTOR(C)	1/16W 3.9KΩ-J [4A, 4B, 4E]
R 362	103P501020	RESISTOR(C)	1/20W 82Ω-J
R 363	103P501020	RESISTOR(C)	1/20W 82Ω-J [4A, 4B, 4E]
R 364	103P706040	METAL RESISTOR(C)	1/16W 1.8MΩ-J
R 365	103P701020	METAL RESISTOR(C)	1/16W 82Ω-J
R 366	103P502010	RESISTOR(C)	1/20W 470Ω-J
R 367	103P703070	METAL RESISTOR(C)	1/16W 10KΩ-J [4A, 4B, 4E]
R 368	103P703070	METAL RESISTOR(C)	1/16W 10KΩ-J
R 3A0	103P503070	RESISTOR(C)	1/20W 10KΩ-J [4A, 4B, 4E]
R 3A1	103P493040	METAL RESISTOR(C)	1/16W 2.4KΩ-F [4A, 4B, 4E]
R 3A2	103P504010	RESISTOR(C)	1/20W 22KΩ-J [4A, 4B, 4E]
R 3A3	103P703030	METAL RESISTOR(C)	1/16W 4.7KΩ-J [4A, 4B, 4E]
R 3A4	103P704010	METAL RESISTOR(C)	1/16W 22KΩ-J [4A, 4B, 4E]
R 3A5	103P704050	METAL RESISTOR(C)	1/16W 47KΩ-J [4A, 4B, 4E]
R 3A6	103P702040	METAL RESISTOR(C)	1/16W 820Ω-J [4A, 4B, 4E]
R 3A7	103P702090	METAL RESISTOR(C)	1/16W 2.2KΩ-J [4A, 4B, 4E]
R 3AA	103P509050	RESISTOR(C)	0Ω RM1608
R 3AC	103P503020	RESISTOR(C)	1/20W 3.9KΩ-J
R 3AD	103P504030	RESISTOR(C)	1/20W 33KΩ-J
R 3AF	103P509050	RESISTOR(C)	0Ω RM1608
R 3AH	103P504030	RESISTOR(C)	1/20W 33KΩ-J
R 3AJ	103P503070	RESISTOR(C)	1/20W 10KΩ-J
R 3AK	103P502050	RESISTOR(C)	1/20W 1KΩ-J
R 3AL	103P503060	RESISTOR(C)	1/20W 8.2KΩ-J
R 3AM	103P503090	RESISTOR(C)	1/20W 15KΩ-J
R 3AN	103P504040	RESISTOR(C)	1/20W 39KΩ-J
R 3AP	103P501070	RESISTOR(C)	1/20W 220Ω-J
R 3AQ	103P501070	RESISTOR(C)	1/20W 220Ω-J
R 3AR	103P504050	RESISTOR(C)	1/20W 47KΩ-J
R 3AS	103P504050	RESISTOR(C)	1/20W 47KΩ-J
R 3AT	103P502090	RESISTOR(C)	1/20W 2.2KΩ-J
R 3AU	103P502090	RESISTOR(C)	1/20W 2.2KΩ-J
R 3AW	103P502050	RESISTOR(C)	1/20W 1KΩ-J
R 3AX	103P504050	RESISTOR(C)	1/20W 47KΩ-J
R 3AY	103P505000	RESISTOR(C)	1/20W 120KΩ-J
R 3B0	103P504010	RESISTOR(C)	1/20W 22KΩ-J [4A, 4B, 4E]
R 3BB	103P503070	RESISTOR(C)	1/20W 10KΩ-J
R 3BC	103P502080	RESISTOR(C)	1/20W 2.7KΩ-J
R 3BD	103P503080	RESISTOR(C)	1/20W 12KΩ-J
R 3BE	103P494070	METAL RESISTOR(C)	1/16W 8.2KΩ-F

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
R 3BF	103P504000	RESISTOR(C)	1/20W 18KΩ-J
R 3BG	103P506010	RESISTOR(C)	1/20W 1MΩ-J
R 3BH	103P505080	RESISTOR(C)	1/20W 560KΩ-J
R 3BJ	103P504010	RESISTOR(C)	1/20W 22KΩ-J
R 3BK	103P503070	RESISTOR(C)	1/20W 10KΩ-J
R 3BL	103P504070	RESISTOR(C)	1/20W 68KΩ-J
R 3BN	103P504000	RESISTOR(C)	1/20W 18KΩ-J
R 3BP	103P502010	RESISTOR(C)	1/20W 470Ω-J
R 3BQ	103P504050	RESISTOR(C)	1/20W 47KΩ-J
R 3BR	103P503030	RESISTOR(C)	1/20W 4.7KΩ-J
R 3BS	103P495070	METAL RESISTOR(C)	1/16W 22KΩ-F
R 3BT	103P495070	METAL RESISTOR(C)	1/16W 22KΩ-F
R 3BU	103P503090	RESISTOR(C)	1/20W 15KΩ-J
R 3BV	103P502070	RESISTOR(C)	1/20W 1.5KΩ-J
R 3BW	103P502070	RESISTOR(C)	1/20W 1.5KΩ-J
R 3BX	103P503090	RESISTOR(C)	1/20W 15KΩ-J
R 3BY	103P502060	RESISTOR(C)	1/20W 1.2KΩ-J
R 3C0	103P495030	METAL RESISTOR(C)	1/16W 15KΩ-F [4A, 4B, 4E]
R 3C1	103P493040	METAL RESISTOR(C)	1/16W 2.4KΩ-F [4A, 4B, 4E]
R 3C2	103P504010	RESISTOR(C)	1/20W 22KΩ-J [4A, 4B, 4E]
R 3C3	103P703030	METAL RESISTOR(C)	1/16W 4.7KΩ-J [4A, 4B, 4E]
R 3C4	103P709050	METAL RESISTOR(C)	1/16W 0Ω [1A, 1B, 1E]
R 3C4	103P704010	METAL RESISTOR(C)	1/16W 22KΩ-J [4A, 4B, 4E]
R 3C5	103P704050	METAL RESISTOR(C)	1/16W 47KΩ-J
R 3C6	103P702040	METAL RESISTOR(C)	1/16W 820Ω-J
R 3C7	103P702090	METAL RESISTOR(C)	1/16W 2.2KΩ-J
R 3CA	103P504060	RESISTOR(C)	1/20W 56KΩ-J
R 3CB	103P503050	RESISTOR(C)	1/20W 6.8KΩ-J
R 3CC	103P503070	RESISTOR(C)	1/20W 10KΩ-J
R 3CD	103P503010	RESISTOR(C)	1/20W 3.3KΩ-J
R 3CF	103P503070	RESISTOR(C)	1/20W 10KΩ-J
R 3CG	103P505000	RESISTOR(C)	1/20W 120KΩ-J
R 3CH	103P502090	RESISTOR(C)	1/20W 2.2KΩ-J
R 3CJ	103P502070	RESISTOR(C)	1/20W 1.5KΩ-J
R 3CK	103P504080	RESISTOR(C)	1/20W 82KΩ-J
R 3CL	103P503060	RESISTOR(C)	1/20W 8.2KΩ-J
R 3CM	103P503090	RESISTOR(C)	1/20W 15KΩ-J
R 3CN	103P504020	RESISTOR(C)	1/20W 27KΩ-J
R 3CQ	103P501050	RESISTOR(C)	1/20W 150Ω-J
R 3CR	103P505030	RESISTOR(C)	1/20W 220KΩ-J
R 3CS	103P505030	RESISTOR(C)	1/20W 220KΩ-J
R 3CT	103P503080	RESISTOR(C)	1/20W 12KΩ-J
R 3CU	103P501030	RESISTOR(C)	1/20W 100Ω-J
R 3CW	103P505000	RESISTOR(C)	1/20W 120KΩ-J
R 3CX	103P492040	RESISTOR(C)	1/16W 910Ω-F
R 3CZ	103P502050	RESISTOR(C)	1/20W 1KΩ-J
R 3D0	103P703010	METAL RESISTOR(C)	1/16W 3.3KΩ-J [4A, 4B, 4E]
R 3D1	103P504020	RESISTOR(C)	1/20W 27KΩ-J [4A, 4B, 4E]
R 3D2	103P503000	RESISTOR(C)	1/20W 2.7KΩ-J [4A, 4B, 4E]
R 3D3	103P702070	METAL RESISTOR(C)	1/16W 1.5KΩ-J [4A, 4B, 4E]
R 3D4	103P701050	METAL RESISTOR(C)	1/16W 150Ω-J [4A, 4B, 4E]
R 3D5	103P502090	RESISTOR(C)	1/20W 2.2KΩ-J [4A, 4B, 4E]
R 3D6	103P502090	RESISTOR(C)	1/20W 2.2KΩ-J [4A, 4B, 4E]
R 3D7	103P702060	METAL RESISTOR(C)	1/16W 1.2KΩ-J [4A, 4B, 4E]
R 3DA	103P502090	RESISTOR(C)	1/20W 2.2KΩ-J

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
R 3DB	103P494090	METAL RESISTOR(C)	1/16W 10KΩ-F
R 3DD	103P494090	METAL RESISTOR(C)	1/16W 10KΩ-F
R 3DE	103P503060	RESISTOR(C)	1/20W 8.2KΩ-J
R 3DF	103P503030	RESISTOR(C)	1/20W 4.7KΩ-J
R 3DG	103P503070	RESISTOR(C)	1/20W 10KΩ-J
R 3DH	103P502050	RESISTOR(C)	1/20W 1KΩ-J
R 3DJ	103P503060	RESISTOR(C)	1/20W 8.2KΩ-J
R 3DK	103P502020	RESISTOR(C)	1/20W 560Ω-J
R 3DL	103P503070	RESISTOR(C)	1/20W 10KΩ-J
R 3DM	103P502050	RESISTOR(C)	1/20W 1KΩ-J
R 3DN	103P503000	RESISTOR(C)	1/20W 2.7KΩ-J
R 3DP	103P502020	RESISTOR(C)	1/20W 560Ω-J
R 3DQ	103P494070	METAL RESISTOR(C)	1/16W 8.2KΩ-F
R 3DR	103P494090	METAL RESISTOR(C)	1/16W 10KΩ-F
R 3DS	103P503060	RESISTOR(C)	1/20W 8.2KΩ-J
R 3DT	103P504050	RESISTOR(C)	1/20W 47KΩ-J
R 3DU	103P504000	RESISTOR(C)	1/20W 18KΩ-J
R 3DV	103P504050	RESISTOR(C)	1/20W 47KΩ-J
R 3DW	103P505040	RESISTOR(C)	1/20W 270KΩ-J
R 3DX	103P504030	RESISTOR(C)	1/20W 33KΩ-J
R 3DY	103P509050	RESISTOR(C)	0Ω RM1608
R 3EA	103P503010	RESISTOR(C)	1/20W 3.3KΩ-J
R 3EB	103P503010	RESISTOR(C)	1/20W 3.3KΩ-J
R 3EC	103P504050	RESISTOR(C)	1/20W 47KΩ-J
R 3ED	103P509050	RESISTOR(C)	0Ω RM1608
R 3EF	103P496030	RESISTOR(C)	1/16W 39KΩ-F
R 3EG	103P495000	METAL RESISTOR(C)	1/16W 11KΩ-F
R 3EH	103P503060	RESISTOR(C)	1/20W 8.2KΩ-J
R 3EK	103P503010	RESISTOR(C)	1/20W 3.3KΩ-J
R 3EL	103P494090	METAL RESISTOR(C)	1/16W 10KΩ-F
R 3EM	103P493080	METAL RESISTOR(C)	1/16W 3.6KΩ-F
R 3EN	103P502030	RESISTOR(C)	1/20W 680Ω-J
R 3EQ	103P502070	RESISTOR(C)	1/20W 1.5KΩ-J
R 3ER	103P502050	RESISTOR(C)	1/20W 1KΩ-J
R 3EU	103P503070	RESISTOR(C)	1/20W 10KΩ-J
R 3EV	103P503020	RESISTOR(C)	1/20W 3.9KΩ-J
R 3EW	103P503020	RESISTOR(C)	1/20W 3.9KΩ-J
R 3EX	103P501070	RESISTOR(C)	1/20W 220Ω-J
R 3EY	103P502080	RESISTOR(C)	1/20W 2.7KΩ-J
R 3EZ	103P502050	RESISTOR(C)	1/20W 1KΩ-J
R 3FA	103P490070	METAL RESISTOR(C)	1/16W 180Ω-F
R 3FB	103P493010	METAL RESISTOR(C)	1/16W 1.8KΩ-F
R 3FC	103P493010	METAL RESISTOR(C)	1/16W 1.8KΩ-F
R 3FD	103P503070	RESISTOR(C)	1/20W 10KΩ-J
R 3FE	103P502050	RESISTOR(C)	1/20W 1KΩ-J
R 3FF	103P502060	RESISTOR(C)	1/20W 1.2KΩ-J
R 3FG	103P501070	RESISTOR(C)	1/20W 220Ω-J
R 3FH	103P503020	RESISTOR(C)	1/20W 3.9KΩ-J
R 3FJ	103P503030	RESISTOR(C)	1/20W 4.7KΩ-J
R 3FK	103P509050	RESISTOR(C)	0Ω RM1608
R 3FL	103P502050	RESISTOR(C)	1/20W 1KΩ-J
R 3FM	103P502070	RESISTOR(C)	1/20W 1.5KΩ-J
R 3FN	103P501030	RESISTOR(C)	1/20W 100Ω-J
R 3FP	103P493020	METAL RESISTOR(C)	1/16W 2KΩ-F
R 3FQ	103P502070	RESISTOR(C)	1/20W 1.5KΩ-J

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
R 3FR	103P503020	RESISTOR(C)	1/20W 3.9KΩ-J
R 3FS	103P502030	RESISTOR(C)	1/20W 680Ω-J
R 3FT	103P503030	RESISTOR(C)	1/20W 4.7KΩ-J
R 3FU	103P503030	RESISTOR(C)	1/20W 4.7KΩ-J
R 3FW	103P504010	RESISTOR(C)	1/20W 22KΩ-J
R 3FX	103P504040	RESISTOR(C)	1/20W 39KΩ-J
R 3FY	103P504090	RESISTOR(C)	1/20W 100KΩ-J
R 3FZ	103P505010	RESISTOR(C)	1/20W 150KΩ-J
R 3GE	103P496030	RESISTOR(C)	1/16W 39KΩ-F [4A, 4B, 4E]
R 3GF	103P503070	RESISTOR(C)	1/20W 10KΩ-J [4A, 4B, 4E]
R 3GG	103P502090	RESISTOR(C)	1/20W 2.2KΩ-J
R 3GH	103P501030	RESISTOR(C)	1/20W 100Ω-J
R 3GJ	103P492050	METAL RESISTOR(C)	1/16W 1.0KΩ-F [4A, 4B, 4E]
R 3GK	103P492050	METAL RESISTOR(C)	1/16W 1.0KΩ-F
R 3GL	103P496030	RESISTOR(C)	1/16W 39KΩ-F [4A, 4B, 4E]
R 3GM	103P502090	RESISTOR(C)	1/20W 2.2KΩ-J
R 3GN	103P503000	RESISTOR(C)	1/20W 2.7KΩ-J
R 3GP	103P503070	RESISTOR(C)	1/20W 10KΩ-J
R 3GQ	103P503070	RESISTOR(C)	1/20W 10KΩ-J
R 3GR	103P503080	RESISTOR(C)	1/20W 12KΩ-J
R 3GT	103P502050	RESISTOR(C)	1/20W 1KΩ-J [1A, 1B, 1E]
R 3GU	103P501070	RESISTOR(C)	1/20W 220Ω-J
R 3GW	103P504010	RESISTOR(C)	1/20W 22KΩ-J
R 3GX	103P503070	RESISTOR(C)	1/20W 10KΩ-J
R 3GY	103P502090	RESISTOR(C)	1/20W 2.2KΩ-J
R 3GZ	103P503030	RESISTOR(C)	1/20W 4.7KΩ-J
R 3HA	103P502060	RESISTOR(C)	1/20W 1.2KΩ-J
R 3HB	103P504020	RESISTOR(C)	1/20W 27KΩ-J
R 3HC	103P502020	RESISTOR(C)	1/20W 560Ω-J
R 3HD	103P502090	RESISTOR(C)	1/20W 2.2KΩ-J
R 3HE	103P504000	RESISTOR(C)	1/20W 18KΩ-J
R 3HJ	103P501030	RESISTOR(C)	1/20W 100Ω-J
R 3HK	103P504090	RESISTOR(C)	1/20W 100KΩ-J
R 3HL	103P501030	RESISTOR(C)	1/20W 100Ω-J
R 3HM	103P501030	RESISTOR(C)	1/20W 100Ω-J
R 3HN	103P501070	RESISTOR(C)	1/20W 220Ω-J
R 3HP	103P509050	RESISTOR(C)	0Ω RM1608
R 3HS	103P505090	RESISTOR(C)	1/20W 680KΩ-J
R 3HT	103P504090	RESISTOR(C)	1/20W 100KΩ-J
R 3VA	103P502060	RESISTOR(C)	1/20W 1.2KΩ-J
R 400	103P503000	RESISTOR(C)	1/20W 2.7KΩ-J
R 401	103P504070	RESISTOR(C)	1/20W 68KΩ-J
R 402	103P505010	RESISTOR(C)	1/20W 150KΩ-J
R 403	103P505050	RESISTOR(C)	1/20W 330KΩ-J
R 404	103P505010	RESISTOR(C)	1/20W 150KΩ-J
R 405	103P503060	RESISTOR(C)	1/20W 8.2KΩ-J
R 406	103P504030	RESISTOR(C)	1/20W 33KΩ-J
R 407	103P504030	RESISTOR(C)	1/20W 33KΩ-J
R 408	103P505010	RESISTOR(C)	1/20W 150KΩ-J
R 409	103P503010	RESISTOR(C)	1/20W 3.3KΩ-J
R 410	103P503030	RESISTOR(C)	1/20W 4.7KΩ-J
R 411	103P504050	RESISTOR(C)	1/20W 47KΩ-J
R 412	103P504050	RESISTOR(C)	1/20W 47KΩ-J
R 414	103P495020	METAL RESISTOR(C)	1/16W 13KΩ-F
R 415	103P495010	METAL RESISTOR(C)	1/16W 12KΩ-F
R 418	103P498020	METAL RESISTOR(C)	1/16W 240KΩ-F
R 421	103P504090	RESISTOR(C)	1/20W 100KΩ-J
R 422	103P503040	RESISTOR(C)	1/20W 5.6KΩ-J
R 423	103P501070	RESISTOR(C)	1/20W 220Ω-J
R 424	103P502050	RESISTOR(C)	1/20W 1KΩ-J
R 425	103P505020	RESISTOR(C)	1/20W 180KΩ-J
R 426	103P504020	RESISTOR(C)	1/20W 27KΩ-J
R 427	103P505080	RESISTOR(C)	1/20W 560KΩ-J
R 431	103P503040	RESISTOR(C)	1/20W 5.6KΩ-J
R 432	103P503040	RESISTOR(C)	1/20W 5.6KΩ-J
R 433	103P503070	RESISTOR(C)	1/20W 10KΩ-J
R 434	103P506010	RESISTOR(C)	1/20W 1MΩ-J
R 435	103P509050	RESISTOR(C)	0Ω RM1608
R 439	103P504090	RESISTOR(C)	1/20W 100KΩ-J
R 443	103P494090	METAL RESISTOR(C)	1/16W 10KΩ-F
R 444	103P494090	METAL RESISTOR(C)	1/16W 10KΩ-F
R 4AA	103P494010	METAL RESISTOR(C)	1/16W 4.7KΩ-F
R 4B0	103P505030	RESISTOR(C)	1/20W 220KΩ-J
R 4B1	103P505040	RESISTOR(C)	1/20W 270KΩ-J
R 4B2	103P504020	RESISTOR(C)	1/20W 27KΩ-J
R 4B3	103P502080	RESISTOR(C)	1/20W 2.7KΩ-J
R 4B4	103P497010	METAL RESISTOR(C)	1/16W 82KΩ-F
R 4B5	103P496030	RESISTOR(C)	1/16W 39KΩ-F
R 4B6	103P495000	METAL RESISTOR(C)	1/16W 11KΩ-F
R 4B7	103P508040	RESISTOR(C)	1/20W 2.2Ω-K
R 4B8	103P508040	RESISTOR(C)	1/20W 2.2Ω-K
R 4B9	103P508040	RESISTOR(C)	1/20W 2.2Ω-K
R 4BF	103P503030	RESISTOR(C)	1/20W 4.7KΩ-J
R 4C0	103P502050	RESISTOR(C)	1/20W 1KΩ-J
R 4C1	103P501050	RESISTOR(C)	1/20W 150Ω-J
R 4C2	103P508050	RESISTOR(C)	1/16W 2.7Ω-K
R 4C3	103P508050	RESISTOR(C)	1/16W 2.7Ω-K
R 4C4	103P508050	RESISTOR(C)	1/16W 2.7Ω-K
R 4C5	103P508050	RESISTOR(C)	1/16W 2.7Ω-K
R 4C6	103P501060	RESISTOR(C)	1/20W 180Ω-J
R 4C7	103P504030	RESISTOR(C)	1/20W 33KΩ-J
R 4C8	103P504010	RESISTOR(C)	1/20W 22KΩ-J
R 4CP	103P503030	RESISTOR(C)	1/20W 4.7KΩ-J
R 4D0	103P504020	RESISTOR(C)	1/20W 27KΩ-J
R 4D1	103P504030	RESISTOR(C)	1/20W 33KΩ-J
R 4D2	103P508040	RESISTOR(C)	1/20W 2.2Ω-K
R 4D3	103P508040	RESISTOR(C)	1/20W 2.2Ω-K
R 4D4	103P508040	RESISTOR(C)	1/20W 2.2Ω-K
R 4D6	103P501070	RESISTOR(C)	1/20W 220Ω-J
R 4G0	103P496050	METAL RESISTOR(C)	1/16W 47KΩ-F
R 4G1	103P496050	METAL RESISTOR(C)	1/16W 47KΩ-F
R 4G2	103P504050	RESISTOR(C)	1/20W 47KΩ-J
R 4G3	103P504060	RESISTOR(C)	1/20W 56KΩ-J
R 4G4	103P502050	RESISTOR(C)	1/20W 1KΩ-J
R 4G5	103P504020	RESISTOR(C)	1/20W 27KΩ-J
R 4G6	103P505040	RESISTOR(C)	1/20W 270KΩ-J
R 4G7	103P503070	RESISTOR(C)	1/20W 10KΩ-J
R 4G8	103P503070	RESISTOR(C)	1/20W 10KΩ-J
R 4JL	103P509050	RESISTOR(C)	0Ω RM1608
R 4JP	103P509050	RESISTOR(C)	0Ω RM1608

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
R 500	103P703070	METAL RESISTOR(C)	1/16W 10KΩ-J [4A, 4B, 4E]
R 501	103P702070	METAL RESISTOR(C)	1/16W 1.5KΩ-J [4A, 4B, 4E]
R 502	103P703070	METAL RESISTOR(C)	1/16W 10KΩ-J [4A, 4B, 4E]
R 503	103P505000	RESISTOR(C)	1/20W 120KΩ-J [4A, 4B, 4E]
R 504	103P504030	RESISTOR(C)	1/20W 33KΩ-J [4A, 4B, 4E]
R 505	103P504030	RESISTOR(C)	1/20W 33KΩ-J
R 506	103P503010	RESISTOR(C)	1/20W 3.3KΩ-J [4A, 4B, 4E]
R 507	103P495040	METAL RESISTOR(C)	1/16W 16KΩ-F
R 508	103P495030	METAL RESISTOR(C)	1/16W 15KΩ-F
R 509	103P495020	METAL RESISTOR(C)	1/16W 13KΩ-F
R 510	103P495050	METAL RESISTOR(C)	1/16W 18KΩ-F
R 511	103P503000	RESISTOR(C)	1/20W 2.7KΩ-J [4A, 4B, 4E]
R 512	103P503040	RESISTOR(C)	1/20W 5.6KΩ-J [4A, 4B, 4E]
R 513	103P503090	RESISTOR(C)	1/20W 15KΩ-J [4A, 4B, 4E]
R 514	103P501080	RESISTOR(C)	1/20W 270Ω-J [4A, 4B, 4E]
R 515	103P503030	RESISTOR(C)	1/20W 4.7KΩ-J [4A, 4B, 4E]
R 516	103P503000	RESISTOR(C)	1/20W 2.7KΩ-J [4A, 4B, 4E]
R 517	103P503050	RESISTOR(C)	1/20W 6.8KΩ-J [4A, 4B, 4E]
R 518	103P503070	RESISTOR(C)	1/20W 10KΩ-J
R 519	103P504060	RESISTOR(C)	1/20W 56KΩ-J [4A, 4B, 4E]
R 520	103P503040	RESISTOR(C)	1/20W 5.6KΩ-J [4A, 4B, 4E]
R 521	103P505000	RESISTOR(C)	1/20W 120KΩ-J [4A, 4B, 4E]
R 522	103P495010	METAL RESISTOR(C)	1/16W 12KΩ-F [4A, 4B, 4E]
R 523	103P504030	RESISTOR(C)	1/20W 33KΩ-J [4A, 4B, 4E]
R 524	103P503010	RESISTOR(C)	1/20W 3.3KΩ-J [4A, 4B, 4E]
R 525	103P509050	RESISTOR(C)	0Ω RM1608 [1A, 1B, 1E]
R 526	103P509050	RESISTOR(C)	0Ω RM1608 [1A, 1B, 1E]
R 527	103P509050	RESISTOR(C)	0Ω RM1608 [1A, 1B, 1E]
R 528	103P502080	RESISTOR(C)	1/20W 2.7KΩ-J
R 529	103P509050	RESISTOR(C)	0Ω RM1608 [1A, 1B, 1E]
R 571	103P352020	RESISTOR(C)	1/8W 560Ω-J
R 572	103P359050	RESISTOR(C)	1/8W 0Ω
R 5A1	103P501020	RESISTOR(C)	1/20W 82Ω-J
R 5A2	103P501030	RESISTOR(C)	1/20W 100Ω-J
R 5A3	103P497030	METAL RESISTOR(C)	1/16W 100KΩ-F
R 5A4	103P498070	METAL RESISTOR(C)	1/16W 390KΩ-F
R 5A5	103P502080	RESISTOR(C)	1/20W 2.7KΩ-J
R 5A6	103P502080	RESISTOR(C)	1/20W 2.7KΩ-J
R 5A7	103P502090	RESISTOR(C)	1/20W 2.2KΩ-J
R 5A8	103P504050	RESISTOR(C)	1/20W 47KΩ-J
R 5A9	103P504050	RESISTOR(C)	1/20W 47KΩ-J
R 5AA	103P503070	RESISTOR(C)	1/20W 10KΩ-J
R 5AB	103P503070	RESISTOR(C)	1/20W 10KΩ-J
R 5AC	103P502090	RESISTOR(C)	1/20W 2.2KΩ-J
R 5AD	103P502090	RESISTOR(C)	1/20W 2.2KΩ-J
R 5AE	103P503030	RESISTOR(C)	1/20W 4.7KΩ-J
R 5AF	103P503030	RESISTOR(C)	1/20W 4.7KΩ-J
R 5AG	103P500070	RESISTOR(C)	1/20W 33Ω-J
R 5AH	103P494000	METAL RESISTOR(C)	1/16W 4.3KΩ-F
R 5AJ	103P501040	RESISTOR(C)	1/20W 120Ω-J
R 5AL	103P495040	METAL RESISTOR(C)	1/16W 16KΩ-F
R 5AM	103P495040	METAL RESISTOR(C)	1/16W 16KΩ-F
R 5AP	103P505030	RESISTOR(C)	1/20W 220KΩ-J
R 5AQ	103P504060	RESISTOR(C)	1/20W 56KΩ-J
R 5AR	103P505030	RESISTOR(C)	1/20W 220KΩ-J
R 5AS	103P504000	RESISTOR(C)	1/20W 18KΩ-J
R 5AT	103P504010	RESISTOR(C)	1/20W 22KΩ-J
R 5AU	103P504070	RESISTOR(C)	1/20W 68KΩ-J
R 5AV	103P504070	RESISTOR(C)	1/20W 68KΩ-J
R 5AW	103P504010	RESISTOR(C)	1/20W 22KΩ-J
R 5AX	103P504010	RESISTOR(C)	1/20W 22KΩ-J
R 5AY	103P504050	RESISTOR(C)	1/20W 47KΩ-J
R 5B1	103P504010	RESISTOR(C)	1/20W 22KΩ-J
R 5B2	103P504010	RESISTOR(C)	1/20W 22KΩ-J
R 5B3	103P504010	RESISTOR(C)	1/20W 22KΩ-J
R 5B4	103P504000	RESISTOR(C)	1/20W 18KΩ-J
R 5B5	103P502050	RESISTOR(C)	1/20W 1KΩ-J
R 5B6	103P506010	RESISTOR(C)	1/20W 1MΩ-J
R 5B7	103P504000	RESISTOR(C)	1/20W 18KΩ-J
R 5B8	103P504030	RESISTOR(C)	1/20W 33KΩ-J
R 5BA	103P504050	RESISTOR(C)	1/20W 47KΩ-J
R 5BB	103P504060	RESISTOR(C)	1/20W 56KΩ-J
R 5BC	103P505030	RESISTOR(C)	1/20W 220KΩ-J
R 5BD	103P504050	RESISTOR(C)	1/20W 47KΩ-J
R 5BE	103P504060	RESISTOR(C)	1/20W 56KΩ-J
R 5BF	103P505030	RESISTOR(C)	1/20W 220KΩ-J
R 5BG	103P504050	RESISTOR(C)	1/20W 47KΩ-J
R 5BH	103P504050	RESISTOR(C)	1/20W 47KΩ-J
R 5BK	103P496030	RESISTOR(C)	1/16W 39KΩ-F
R 5C1	103P503070	RESISTOR(C)	1/20W 10KΩ-J
R 5C2	103P504050	RESISTOR(C)	1/20W 47KΩ-J
R 5C4	103P504020	RESISTOR(C)	1/20W 27KΩ-J
R 5CB	103P503030	RESISTOR(C)	1/20W 4.7KΩ-J
R 5D0	103P504050	RESISTOR(C)	1/20W 47KΩ-J
R 5D1	103P504050	RESISTOR(C)	1/20W 47KΩ-J
R 5D2	103P503070	RESISTOR(C)	1/20W 10KΩ-J
R 5D3	103P503070	RESISTOR(C)	1/20W 10KΩ-J
R 5DH	103P504050	RESISTOR(C)	1/20W 47KΩ-J [1A, 1B, 1E]
R 5DV	103P504050	RESISTOR(C)	1/20W 47KΩ-J [1A, 1B, 1E]
R 5E0	103P501070	RESISTOR(C)	1/20W 220Ω-J
R 5E1	103P503080	RESISTOR(C)	1/20W 12KΩ-J
R 5E2	103P503010	RESISTOR(C)	1/20W 3.3KΩ-J
R 5E3	103P504050	RESISTOR(C)	1/20W 47KΩ-J
R 5E4	103P503070	RESISTOR(C)	1/20W 10KΩ-J
R 5E6	103P509050	RESISTOR(C)	0Ω RM1608 [1A, 1B, 1E]
R 5EA	103P504050	RESISTOR(C)	1/20W 47KΩ-J
R 5ED	103P504010	RESISTOR(C)	1/20W 22KΩ-J
R 5EF	103P503020	RESISTOR(C)	1/20W 3.9KΩ-J
R 5FA	103P503020	RESISTOR(C)	1/20W 3.9KΩ-J
R 5FB	103P494020	METAL RESISTOR(C)	1/16W 5.1KΩ-F
R 5FC	103P503070	RESISTOR(C)	1/20W 10KΩ-J
R 5FD	103P502090	RESISTOR(C)	1/20W 2.2KΩ-J
R 5FE	103P501030	RESISTOR(C)	1/20W 100Ω-J
R 5FF	103P503070	RESISTOR(C)	1/20W 10KΩ-J
R 5FG	103P501070	RESISTOR(C)	1/20W 220Ω-J
R 5FH	103P502050	RESISTOR(C)	1/20W 1KΩ-J
R 5FJ	103P503070	RESISTOR(C)	1/20W 10KΩ-J
R 5FK	103P501090	RESISTOR(C)	1/20W 330Ω-J
R 5FL	103P502030	RESISTOR(C)	1/20W 680Ω-J
R 5FN	103P503070	RESISTOR(C)	1/20W 10KΩ-J

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
R 5FQ	103P494020	METAL RESISTOR(C)	1/16W 5.1KΩ-F
R 5FS	103P503050	RESISTOR(C)	1/20W 6.8KΩ-J
R 5FT	103P503050	RESISTOR(C)	1/20W 6.8KΩ-J
R 5FU	103P502020	RESISTOR(C)	1/20W 560Ω-J
R 5FV	103P502020	RESISTOR(C)	1/20W 560Ω-J
R 5FW	103P502020	RESISTOR(C)	1/20W 560Ω-J
R 5FX	103P501030	RESISTOR(C)	1/20W 100Ω-J
R 5FY	103P503070	RESISTOR(C)	1/20W 10KΩ-J
R 5FZ	103P503070	RESISTOR(C)	1/20W 10KΩ-J
R 5GA	103P493020	METAL RESISTOR(C)	1/16W 2KΩ-F
R 5GB	103P492080	RESISTOR(C)	1/16W 1.3KΩ-F
R 5GC	103P492080	RESISTOR(C)	1/16W 1.3KΩ-F
R 5GD	103P501070	RESISTOR(C)	1/20W 220Ω-J
R 5GE	103P502040	RESISTOR(C)	1/20W 820Ω-J
R 5JK	103P509050	RESISTOR(C)	0Ω RM1608
R 5JL	103P509050	RESISTOR(C)	0Ω RM1608
R 5JP	103P509050	RESISTOR(C)	0Ω RM1608
R 5JQ	103P509050	RESISTOR(C)	0Ω RM1608
R 5KE	103P502010	RESISTOR(C)	1/20W 470Ω-J
R 5KL	103P501020	RESISTOR(C)	1/20W 82Ω-J
R 5KM	103P509010	METAL RESISTOR(C)	1/16W 8.2Ω-K
R 5LC	103P502090	RESISTOR(C)	1/20W 2.2KΩ-J
R 5LD	103P504050	RESISTOR(C)	1/20W 47KΩ-J
R 5LE	103P505050	RESISTOR(C)	1/20W 330KΩ-J
R 5LF	103P505020	RESISTOR(C)	1/20W 180KΩ-J
R 5LG	103P492010	METAL RESISTOR(C)	1/16W 680Ω-F
R 5LH	103P495070	METAL RESISTOR(C)	1/16W 22KΩ-F
R 5LJ	103P494070	METAL RESISTOR(C)	1/16W 8.2KΩ-F
R 5LK	103P506050	RESISTOR(C)	1/20W 2.2MΩ-J
R 5LL	103P503030	RESISTOR(C)	1/20W 4.7KΩ-J
R 5LM	103P504060	RESISTOR(C)	1/20W 56KΩ-J
R 5LN	103P402000	RESISTOR(C)	1/10W 390Ω-J
R 5LP	103P491080	METAL RESISTOR(C)	1/16W 510Ω-F
R 5LQ	103P492090	RESISTOR(C)	1/16W 1.5KΩ-F
R 5LR	103P495010	METAL RESISTOR(C)	1/16W 12KΩ-F
R 5LS	103P497060	METAL RESISTOR(C)	1/16W 130KΩ-F
R 5LT	103P498040	METAL RESISTOR(C)	1/16W 300KΩ-F
R 5LU	103P497050	METAL RESISTOR(C)	1/16W 120KΩ-F
R 5LV	103P493070	METAL RESISTOR(C)	1/16W 3.3KΩ-F
R 5LW	103P495070	METAL RESISTOR(C)	1/16W 22KΩ-F
R 5LX	103P[illegible]90	METAL RESISTOR(C)	1/16W 10KΩ-F
R 5LY	103P495010	METAL RESISTOR(C)	1/16W 12KΩ-F
R 5LZ	103P502090	RESISTOR(C)	1/20W 2.2KΩ-J
R 5MA	103P508090	METAL RESISTOR(C)	1/16W 5.6Ω-K
R 5MB	103P508090	METAL RESISTOR(C)	1/16W 5.6Ω-K
R 5MJ	103P509050	RESISTOR(C)	0Ω RM1608
R 5MK	103P509050	RESISTOR(C)	0Ω RM1608
R 5RA	103P503070	RESISTOR(C)	1/20W 10KΩ-J
R 5US	103P409050	RESISTOR(C)	1/10W 0Ω
R 5ZA	103P493090	METAL RESISTOR(C)	1/16W 3.9KΩ-F
R 5ZB	103P492050	METAL RESISTOR(C)	1/16W 1.0KΩ-F
R 5ZC	103P495000	METAL RESISTOR(C)	1/16W 11KΩ-F
R 6A0	103P502050	RESISTOR(C)	1/20W 1KΩ-J
R 6A1	103P502060	RESISTOR(C)	1/20W 1.2KΩ-J
R 6A2	103P502050	RESISTOR(C)	1/20W 1KΩ-J
R 6A3	103P504010	RESISTOR(C)	1/20W 22KΩ-J
R 6A4	103P504010	RESISTOR(C)	1/20W 22KΩ-J
R 6A5	103P502060	RESISTOR(C)	1/20W 1.2KΩ-J
R 6A6	103P501080	RESISTOR(C)	1/20W 270Ω-J
R 6A8	103P504090	RESISTOR(C)	1/20W 100KΩ-J
R 6A9	103P504090	RESISTOR(C)	1/20W 100KΩ-J
R 6AA	103P503060	RESISTOR(C)	1/20W 8.2KΩ-J [4A, 4B, 4E]
R 6AB	103P506010	RESISTOR(C)	1/20W 1MΩ-J [4A, 4B, 4E]
R 6AC	103P505090	RESISTOR(C)	1/20W 680KΩ-J [4A, 4B, 4E]
R 6AF	103P505090	RESISTOR(C)	1/20W 680KΩ-J [4A, 4B, 4E]
R 6AG	103P506010	RESISTOR(C)	1/20W 1MΩ-J [4A, 4B, 4E]
R 6AH	103P503060	RESISTOR(C)	1/20W 8.2KΩ-J [4A, 4B, 4E]
R 6AJ	103P505090	RESISTOR(C)	1/20W 680KΩ-J [4A, 4B, 4E]
R 6AM	103P505090	RESISTOR(C)	1/20W 680KΩ-J [4A, 4B, 4E]
R 6AN	103P494090	METAL RESISTOR(C)	1/16W 10KΩ-F [4A, 4B, 4E]
R 6AP	103P495040	METAL RESISTOR(C)	1/16W 16KΩ-F [4A, 4B, 4E]
R 6AQ	103P502090	RESISTOR(C)	1/20W 2.2KΩ-J [4A, 4B, 4E]
R 6AR	103P502090	RESISTOR(C)	1/20W 2.2KΩ-J [4A, 4B, 4E]
R 6AS	103P500070	RESISTOR(C)	1/20W 33Ω-J [4A, 4B, 4E]
R 6AT	103P500070	RESISTOR(C)	1/20W 33Ω-J [4A, 4B, 4E]
R 6AU	103P504090	RESISTOR(C)	1/20W 100KΩ-J [4A, 4B, 4E]
R 6AV	103P504090	RESISTOR(C)	1/20W 100KΩ-J [4A, 4B, 4E]
R 6AW	103P505090	RESISTOR(C)	1/20W 680KΩ-J [4A, 4B, 4E]
R 6AX	103P509050	RESISTOR(C)	0Ω RM1608 [4A, 4B, 4E]
R 6AY	103P509050	RESISTOR(C)	0Ω RM1608 [4A, 4B, 4E]
R 6B4	103P509050	RESISTOR(C)	0Ω RM1608 [1A, 1E, 4B, 4E]
R 6B5	103P509050	RESISTOR(C)	0Ω RM1608 [1A, 1E, 4B, 4E]
R 6B6	103P503030	RESISTOR(C)	1/20W 4.7KΩ-J
R 6B8	103P504010	RESISTOR(C)	1/20W 22KΩ-J
R 6B9	103P504010	RESISTOR(C)	1/20W 22KΩ-J
R 6BA	103P503060	RESISTOR(C)	1/20W 8.2KΩ-J [4A, 4B, 4E]
R 6BB	103P503060	RESISTOR(C)	1/20W 8.2KΩ-J [4A, 4B, 4E]
R 6C1	103P506050	RESISTOR(C)	1/20W 2.2MΩ-J
R 6C2	103P503090	RESISTOR(C)	1/20W 15KΩ-J
R 6C4	103P503070	RESISTOR(C)	1/20W 10KΩ-J
R 6C5	103P502040	RESISTOR(C)	1/20W 820Ω-J
R 6C6	103P502070	RESISTOR(C)	1/20W 1.5KΩ-J
R 6C7	103P502050	RESISTOR(C)	1/20W 1KΩ-J
R 6C9	103P509050	RESISTOR(C)	0Ω RM1608
R 6D0	103P505010	RESISTOR(C)	1/20W 150KΩ-J
R 6D2	103P509050	RESISTOR(C)	0Ω RM1608
R 6D3	103P508040	RESISTOR(C)	1/20W 2.2Ω-K
R 6D4	103P508040	RESISTOR(C)	1/20W 2.2Ω-K
R 6D5	103P508040	RESISTOR(C)	1/20W 2.2Ω-K
R 6D6	103P508040	RESISTOR(C)	1/20W 2.2Ω-K
R 6D8	103P504060	RESISTOR(C)	1/20W 56KΩ-J
R 6D9	103P504020	RESISTOR(C)	1/20W 27KΩ-J
R 6E0	103P504010	RESISTOR(C)	1/20W 22KΩ-J
R 6E1	103P509050	RESISTOR(C)	0Ω RM1608
R 6E2	103P509050	RESISTOR(C)	0Ω RM1608
R 6E3	103P504010	RESISTOR(C)	1/20W 22KΩ-J
R 6E4	103P503090	RESISTOR(C)	1/20W 15KΩ-J
R 6E5	103P504000	RESISTOR(C)	1/20W 18KΩ-J
R 6E6	103P504050	RESISTOR(C)	1/20W 47KΩ-J
R 6E7	103P503070	RESISTOR(C)	1/20W 10KΩ-J

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
R 6R3	103P504060	RESISTOR(C)	1/20W 56KΩ-J
R 6ZA	103P505070	RESISTOR(C)	1/20W 470KΩ-J [4A]
R 6ZB	103P505070	RESISTOR(C)	1/20W 470KΩ-J [4A]
R 6ZC	103P504050	RESISTOR(C)	1/20W 47KΩ-J [4A]
R 6ZG	103P505070	RESISTOR(C)	1/20W 470KΩ-J [4A]
R 6ZH	103P505070	RESISTOR(C)	1/20W 470KΩ-J [4A]
R 6ZJ	103P504050	RESISTOR(C)	1/20W 47KΩ-J [4A]
R 800	103P504020	RESISTOR(C)	1/20W 27KΩ-J
R 801	103P504090	RESISTOR(C)	1/20W 100KΩ-J
R 802	103P504050	RESISTOR(C)	1/20W 47KΩ-J
R 803	103P504050	RESISTOR(C)	1/20W 47KΩ-J
R 804	103P504050	RESISTOR(C)	1/20W 47KΩ-J
R 805	103P504050	RESISTOR(C)	1/20W 47KΩ-J
R 806	103P502090	RESISTOR(C)	1/20W 2.2KΩ-J
R 807	103P502090	RESISTOR(C)	1/20W 2.2KΩ-J
R 808	103P505030	RESISTOR(C)	1/20W 220KΩ-J
R 809	103P505030	RESISTOR(C)	1/20W 220KΩ-J
R 810	103P505030	RESISTOR(C)	1/20W 220KΩ-J
R 812	103P502050	RESISTOR(C)	1/20W 1KΩ-J
R 813	103P502060	RESISTOR(C)	1/20W 1.2KΩ-J
R 814	103P506050	RESISTOR(C)	1/20W 2.2MΩ-J
R 815	103P503070	RESISTOR(C)	1/20W 10KΩ-J
R 817	103P506010	RESISTOR(C)	1/20W 1MΩ-J
R 818	103P504050	RESISTOR(C)	1/20W 47KΩ-J
R 820	103P527030	METAL RESISTOR(C)	1/10W 100KΩ-D
R 821	103P524030	METAL RESISTOR(C)	1/10W 5.6KΩ-D
R 822	103P527030	METAL RESISTOR(C)	1/10W 100KΩ-D
R 824	103P502050	RESISTOR(C)	1/20W 1KΩ-J
R 825	103P503070	RESISTOR(C)	1/20W 10KΩ-J
R 829	103P503060	RESISTOR(C)	1/20W 8.2KΩ-J
R 833	103P504090	RESISTOR(C)	1/20W 100KΩ-J
R 840	103P502090	RESISTOR(C)	1/20W 2.2KΩ-J
R 841	103P506070	RESISTOR(C)	1/16W 3.3MΩ-K
R 842	103P506070	RESISTOR(C)	1/16W 3.3MΩ-K
R 843	103P506070	RESISTOR(C)	1/16W 3.3MΩ-K
R 845	103P509050	RESISTOR(C)	0Ω RM1608
R 846	103P509050	RESISTOR(C)	0Ω RM1608 [1A, 1B, 1E]
R 847	103P509050	RESISTOR(C)	0Ω RM1608 [1A, 1B, 1E]
R 852	103P502050	RESISTOR(C)	1/20W 1KΩ-J
R 853	103P502050	RESISTOR(C)	1/20W 1KΩ-J [4A, 4B, 4E]
R 854	103P502050	RESISTOR(C)	1/20W 1KΩ-J [4A, 4B, 4E]
R 855	103P503030	RESISTOR(C)	1/20W 4.7KΩ-J
R 856	103P502090	RESISTOR(C)	1/20W 2.2KΩ-J
R 906	103P503070	RESISTOR(C)	1/20W 10KΩ-J
R 907	103P503010	RESISTOR(C)	1/20W 3.3KΩ-J
R 908	103P505090	RESISTOR(C)	1/20W 680KΩ-J
R 909	103P505010	RESISTOR(C)	1/20W 150KΩ-J
R 910	103P505060	RESISTOR(C)	1/16W 390KΩ-J
R 911	103P496030	RESISTOR(C)	1/16W 39KΩ-F
R 912	103P495050	METAL RESISTOR(C)	1/16W 18KΩ-F
R 913	103P503090	RESISTOR(C)	1/20W 15KΩ-J
R 914	103P503070	RESISTOR(C)	1/20W 10KΩ-J
R 915	103P502000	RESISTOR(C)	1/20W 390Ω-J
R 916	103P402010	RESISTOR(C)	1/10W 470Ω-J
R 917	103P502000	RESISTOR(C)	1/20W 390Ω-J
R 918	103P402010	RESISTOR(C)	1/10W 470Ω-J
R 919	103P501050	RESISTOR(C)	1/20W 150Ω-J
R 920	103P481070	METAL RESISTOR(C)	1/4W 220Ω-J
R 921	103P496010	METAL RESISTOR(C)	1/16W 33KΩ-F
R 922	103P494010	METAL RESISTOR(C)	1/16W 4.7KΩ-F
R 923	103P500090	RESISTOR(C)	1/20W 47Ω-J

CAPACITORS AND TRIMMERS

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
	154P333030	CAPACITOR(C)	CH50V 82pF-J
C 200	154P355000	CAPACITOR(C)	SL50V 390pF-J
C 201	154P355000	CAPACITOR(C)	SL50V 390pF-J
C 202	154P353080	CAPACITOR(C)	SL50V 100pF-J
C 203	141P140090	CAPACITOR(C)	B50V 1000pF-K
C 204	154P351060	CAPACITOR(C)	SL50V 15pF-J
C 205	141P141070	CAPACITOR(C)	B50V 4700pF-K
C 207	154P354000	CAPACITOR(C)	SL50V 150pF-J
C 208	141P136030	CAPACITOR(C)	F16V 1μF-Z
C 209	141P136030	CAPACITOR(C)	F16V 1μF-Z
C 211	141P135070	CAPACITOR(C)	F16V 1μF-Z [4A, 4B, 4E]
C 212	141P135070	CAPACITOR(C)	F16V 1μF-Z [4A, 4B, 4E]
C 213	141P135070	CAPACITOR(C)	F16V 1μF-Z [4A, 4B, 4E]
C 214	141P144020	CAPACITOR(C)	F25V/16V 0.1μF-Z [4A, 4B, 4E]
C 215	141P144020	CAPACITOR(C)	F25V/16V 0.1μF-Z [4A, 4B, 4E]
C 216	154P355040	CAPACITOR(C)	SL25V 560pF-J [4A, 4B, 4E]
C 217	141P143080	CAPACITOR(C)	F50V 0.01μF-Z [4A, 4B, 4E]
C 218	154P355040	CAPACITOR(C)	SL25V 560pF-J [4A, 4B, 4E]
C 219	141P143080	CAPACITOR(C)	F50V 0.01μF-Z [4A, 4B, 4E]
C 220	141P144020	CAPACITOR(C)	F25V/16V 0.1μF-Z [4A, 4B, 4E]
C 221	141P135070	CAPACITOR(C)	F16V 1μF-Z [4A, 4B, 4E]
C 222	141P144020	CAPACITOR(C)	F25V/16V 0.1μF-Z [4A, 4B, 4E]
C 223	141P135070	CAPACITOR(C)	F16V 1μF-Z [4A, 4B, 4E]
C 224	141P144020	CAPACITOR(C)	F25V/16V 0.1μF-Z [4A, 4B, 4E]
C 225	154P355060	CAPACITOR(C)	SL25V 680pF-J [4A, 4B, 4E]
C 226	141P143080	CAPACITOR(C)	F50V 0.01μF-Z [4A, 4B, 4E]
C 227	141P144020	CAPACITOR(C)	F25V/16V 0.1μF-Z [4A, 4B, 4E]
C 228	141P144020	CAPACITOR(C)	F25V/16V 0.1μF-Z [4A, 4B, 4E]
C 229	154P355060	CAPACITOR(C)	SL25V 680pF-J [4A, 4B, 4E]
C 230	141P143080	CAPACITOR(C)	F50V 0.01μF-Z [4A, 4B, 4E]
C 231	141P144020	CAPACITOR(C)	F25V/16V 0.1μF-Z [4A, 4B, 4E]
C 232	141P135070	CAPACITOR(C)	F16V 1μF-Z [4A, 4B, 4E]
C 233	141P144020	CAPACITOR(C)	F25V/16V 0.1μF-Z
C 234	141P135070	CAPACITOR(C)	F16V 1μF-Z
C 235	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 236	154P353000	CAPACITOR(C)	SL50V 56pF-J
C 237	141P144020	CAPACITOR(C)	F25V/16V 0.1μF-Z
C 238	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 239	141P135070	CAPACITOR(C)	F16V 1μF-Z
C 240	154P353000	CAPACITOR(C)	SL50V 56pF-J

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
C 241	141P144020	CAPACITOR(C)	F25V/16V 0.1μF-Z
C 242	141P135070	CAPACITOR(C)	F16V 1μF-Z
C 243	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 244	154P353000	CAPACITOR(C)	SL50V 56pF-J
C 245	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 246	154P353000	CAPACITOR(C)	SL50V 56pF-J
C 247	141P144020	CAPACITOR(C)	F25V/16V 0.1μF-Z
C 248	141P135070	CAPACITOR(C)	F16V 1μF-Z
C 249	141P135070	CAPACITOR(C)	F16V 1μF-Z
C 250	141P135070	CAPACITOR(C)	F16V 1μF-Z
C 254	141P135070	CAPACITOR(C)	F16V 1μF-Z
C 255	141P135070	CAPACITOR(C)	F16V 1μF-Z
C 256	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 257	141P144020	CAPACITOR(C)	F25V/16V 0.1μF-Z
C 258	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 259	141P144020	CAPACITOR(C)	F25V/16V 0.1μF-Z
C 260	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 261	141P144020	CAPACITOR(C)	F25V/16V 0.1μF-Z
C 262	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 263	141P144020	CAPACITOR(C)	F25V/16V 0.1μF-Z
C 280	141P144020	CAPACITOR(C)	F25V/16V 0.1μF-Z [4A, 4B, 4E]
C 281	141P141080	CAPACITOR(C)	B50V 5600pF-K
C 282	141P141070	CAPACITOR(C)	B50V 4700pF-K
C 283	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 284	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 285	141P135070	CAPACITOR(C)	F16V 1μF-Z
C 286	141P135070	CAPACITOR(C)	F16V 1μF-Z
C 289	141P144020	CAPACITOR(C)	F25V/16V 0.1μF-Z
C 291	154P352040	CAPACITOR(C)	SL50V 33pF-J
C 292	154P353060	CAPACITOR(C)	SL50V 100pF-J
C 293	154P353060	CAPACITOR(C)	SL50V 100pF-J
C 294	141P136030	CAPACITOR(C)	F16V 1μF-Z
C 295	141P136030	CAPACITOR(C)	F16V 1μF-Z
C 297	154P342030	CAPACITOR(C)	CH50V 33pF-J
C 298	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 299	141P143080	CAPACITOR(C)	F50V 0.01μF-Z [4A, 4B, 4E]
C 2A0	141P136030	CAPACITOR(C)	F16V 1μF-Z
C 2A1	141P136030	CAPACITOR(C)	F16V 1μF-Z
C 2A2	141P136030	CAPACITOR(C)	F16V 1μF-Z
C 2A3	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 2A4	141P143090	CAPACITOR(C)	F50V 0.022μF-Z
C 2A5	154P342030	CAPACITOR(C)	CH50V 33pF-J
C 2A6	154P344070	CAPACITOR(C)	CH25V 330pF-J [1A, 1B, 1E, 4B, 4E]
C 2A6	154P344050	CAPACITOR(C)	CH25V/50V [4A]
C 2A7	181P509020	CAPACITOR(C)	0.4W 35V 2.2μF-M
C 2A8	141P136030	CAPACITOR(C)	F16V 1μF-Z
C 2A9	141P136030	CAPACITOR(C)	F16V 1μF-Z
C 2AA	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 2AB	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 2AC	181P509000	CAPACITOR(C)	0.4W 25V 4.7μF-M
C 2AD	181P502040	CAPACITOR(C)	0.4W 16V 22μF-M
C 2AE	181P508080	CAPACITOR(C)	0.4W 16V 10μF-M
C 2AF	189P123070	CAPACITOR(C)	16V 10μF-M
C 2AG	154P340060	CAPACITOR(C)	CH50V 5pF-C
C 2AL	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 2AM	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 2AN	141P140090	CAPACITOR(C)	B50V 1000pF-K
C 2AP	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 2AQ	154P341050	CAPACITOR(C)	CH50V 15pF-J
C 2AU	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 2AV	154P343010	CAPACITOR(C)	CH50V 68pF-J
C 2B4	154P334090	CAPACITOR(C)	CH50V 390pF-J
C 2B5	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 2B6	141P136040	CAPACITOR(C)	F25V/16V 2.2μF-Z
C 2B7	181P509080	CAPACITOR(C)	0.4W 50V 1μF-M
C 2B9	141P136040	CAPACITOR(C)	F25V/16V 2.2μF-Z
C 2BB	154P341030	CAPACITOR(C)	CH50V 12pF-J
C 2BC	154P342010	CAPACITOR(C)	CH50V 27pF-J
C 2BD	141P133080	CAPACITOR(C)	F50V 0.01μF-Z
C 2BE	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 2BF	154P341030	CAPACITOR(C)	CH50V 12pF-J
C 2BG	154P342010	CAPACITOR(C)	CH50V 27pF-J
C 2BH	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 2BJ	181P508050	CAPACITOR(C)	0.4W 6.3V 22μF-M
C 2BK	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 2BL	141P135070	CAPACITOR(C)	F16V 1μF-Z
C 2BM	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 2BN	141P135070	CAPACITOR(C)	F16V 1μF-Z
C 2BQ	141P135010	CAPACITOR(C)	F25V 0.33μF-Z
C 2BR	181P509090	CAPACITOR(C)	0.4W 50V 2.2μF-M
C 2BS	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 2C0	141P142010	CAPACITOR(C)	B25V 0.01μF-K
C 2C1	181P509090	CAPACITOR(C)	0.4W 50V 2.2μF-M
C 2C2	181P509030	CAPACITOR(C)	0.4W 35V 3.3μF-M
C 2C3	181P508050	CAPACITOR(C)	0.4W 6.3V 22μF-M
C 2C5	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 2C9	154P354020	CAPACITOR(C)	SL50V 180pF-J
C 2CB	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 2D0	141P136030	CAPACITOR(C)	F16V 1μF-Z
C 2D1	141P136030	CAPACITOR(C)	F16V 1μF-Z
C 2D2	154P354040	CAPACITOR(C)	SL50V 220pF-J
C 2D4	154P352040	CAPACITOR(C)	SL50V 33pF-J
C 2D5	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 2DA	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 2DB	181P508070	CAPACITOR(C)	0.4W 16V 4.7μF-M
C 2DC	141P134010	CAPACITOR(C)	F50V 0.047μF-Z
C 2DD	141P134010	CAPACITOR(C)	F50V 0.047μF-Z
C 2E0	154P351060	CAPACITOR(C)	SL50V 15pF-J
C 2E1	154P353060	CAPACITOR(C)	SL50V 100pF-J [4E]
C 2H0	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 2H1	154P353040	CAPACITOR(C)	SL50V 82pF-J
C 2H2	154P352060	CAPACITOR(C)	SL50V 39pF-J
C 2H3	154P351060	CAPACITOR(C)	SL50V 15pF-J
C 2H4	154P351040	CAPACITOR(C)	SL50V 12pF-C
C 2P0	141P136030	CAPACITOR(C)	F16V 1μF-Z
C 2P1	141P136030	CAPACITOR(C)	F16V 1μF-Z
C 2P2	154P341090	CAPACITOR(C)	CH50V 22pF-J
C 2P3	154P343030	CAPACITOR(C)	CH50V 82pF-J
C 2P4	181P509020	CAPACITOR(C)	0.4W 35V 2.2μF-M

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
C 2P5	141P136030	CAPACITOR(C)	F16V 1μF-Z
C 2P6	181P509080	CAPACITOR(C)	0.4W 50V 1μF-M
C 2P7	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 2R0	141P136030	CAPACITOR(C)	F16V 1μF-Z
C 2R1	141P136030	CAPACITOR(C)	F16V 1μF-Z
C 2R2	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 2V0	141P136030	CAPACITOR(C)	F16V 1μF-Z
C 2V1	141P136030	CAPACITOR(C)	F16V 1μF-Z
C 2000	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 2001	181P508050	CAPACITOR(C)	0.4W 6.3V 22μF-M
C 2002	181P508080	CAPACITOR(C)	0.4W 16V 10μF-M
C 2003	141P136030	CAPACITOR(C)	F16V 1μF-Z
C 2004	141P136030	CAPACITOR(C)	F16V 1μF-Z
C 2005	181P508010	CAPACITOR(C)	4V 220μF-M
C 2006	181P508010	CAPACITOR(C)	4V 220μF-M
C 2007	141P136030	CAPACITOR(C)	F16V 1μF-Z
C 2008	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 2009	181P500030	CAPACITOR(C)	0.4W 6.3V 47μF-M
C 2010	181P508050	CAPACITOR(C)	0.4W 6.3V 22μF-M
C 300	189P120050	CAPACITOR(C)	4V 22μF-M
C 301	181P510070	CAPACITOR(C)	0.4W 10V 10μF-M
C 302	141P135070	CAPACITOR(C)	F16V 1μF-Z
C 303	172P341090	CAPACITOR(C)	16V 0.033μF-J [1A, 1B, 1E]
C 304	172P341060	CAPACITOR(C)	16V 0.018μF-J [1A, 1B, 1E]
C 305	154P354040	CAPACITOR(C)	SL50V 220pF-J
C 306	189P125010	C-TANTALUM(C)	25V
C 307	154P355060	CAPACITOR(C)	SL25V 680pF-J
C 308	154P327000	CAPACITOR(C)	SL50V 2700pF-J
C 309	189P120050	CAPACITOR(C)	4V 22μF-M
C 310	141P132030	CAPACITOR(C)	B50V 0.015μF-K
C 311	181P508050	CAPACITOR(C)	0.4W 6.3V 22μF-M
C 312	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 313	189P122010	CAPACITOR(C)	10V 2.2μF-M
C 314	189P122010	CAPACITOR(C)	10V 2.2μF-M
C 320	141P141040	CAPACITOR(C)	B50V 2700pF-K
C 321	141P137080	CAPACITOR(C)	B50V 0.047μF-K
C 323	154P354040	CAPACITOR(C)	SL50V 220pF-J
C 324	189P096020	C-PLASTIC-PP	100V 3300pF-J
C 325	141P136030	CAPACITOR(C)	F16V 1μF-Z
C 352	181P509030	CAPACITOR(C)	0.4W 35V 3.3μF-M
C 353	181P509030	CAPACITOR(C)	0.4W 35V 3.3μF-M [4A, 4B, 4E]
C 354	172P312070	CAPACITOR(C)	25V 0.15μF-J
C 355	172P312070	CAPACITOR(C)	25V 0.15μF-J [4A, 4B, 4E]
C 356	172P312070	CAPACITOR(C)	25V 0.15μF-J
C 357	172P312070	CAPACITOR(C)	25V 0.15μF-J [4A, 4B, 4E]
C 358	154P353060	CAPACITOR(C)	SL50V 100pF-J
C 359	154P353060	CAPACITOR(C)	SL50V 100pF-J [4A, 4B, 4E]
C 360	181P507080	CAPACITOR(C)	4V 33μF-M
C 361	181P507080	CAPACITOR(C)	4V 33μF-M [4A, 4B, 4E]
C 362	181P508070	CAPACITOR(C)	0.4W 16V 4.7μF-M
C 363	181P500040	CAPACITOR(C)	6.3V 100μF-M
C 364	181P508050	CAPACITOR(C)	0.4W 6.3V 22μF-M
C 3A0	189P120050	CAPACITOR(C)	4V 22μF-M [4A, 4B, 4E]
C 3A1	154P326080	CAPACITOR(C)	SL50V 2200pF-J [4A, 4B, 4E]
C 3A2	189P120030	C-TANTALUM(C)	4V 10μF-M [4A, 4B, 4E]
C 3A3	141P142010	CAPACITOR(C)	B25V 0.01μF-K [4A, 4B, 4E]
C 3A4	189P122010	CAPACITOR(C)	10V 2.2μF-M [4A, 4B, 4E]
C 3A5	181P507080	CAPACITOR(C)	4V 33μF-M [4A, 4B, 4E]
C 3A6	141P136040	CAPACITOR(C)	F25V/16V 2.2μF-Z [4A, 4B, 4E]
C 3A7	172P341030	CAPACITOR(C)	16V 0.01μF-J [4A, 4B, 4E]
C 3A8	141P138060	CAPACITOR(C)	B25V 0.22μF-K [4A, 4B, 4E]
C 3A9	141P136040	CAPACITOR(C)	F25V/16V 2.2μF-Z [4A, 4B, 4E]
C 3AA	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 3AB	141P144020	CAPACITOR(C)	F25V/16V 0.1μF-Z
C 3AC	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 3AD	141P144020	CAPACITOR(C)	F25V/16V 0.1μF-Z
C 3AE	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 3AF	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 3AG	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 3AH	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 3AJ	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 3AK	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 3AL	189P121050	CAPACITOR(C)	6.3V 15μF-M
C 3AM	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 3AN	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 3AP	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 3AR	181P512020	CAPACITOR(C)	0.4W 16V 4.7μF-M
C 3AS	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 3AT	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 3AU	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 3AW	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 3AX	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 3AY	189P122010	CAPACITOR(C)	10V 2.2μF-M
C 3AZ	154P343050	CAPACITOR(C)	CH50V 100pF-J
C 3B0	141P135070	CAPACITOR(C)	F16V 1μF-Z [4A, 4B, 4E]
C 3B1	181P508050	CAPACITOR(C)	0.4W 6.3V 22μF-M [4A, 4B, 4E]
C 3B2	181P508050	CAPACITOR(C)	0.4W 6.3V 22μF-M [4A, 4B, 4E]
C 3B3	141P135070	CAPACITOR(C)	F16V 1μF-Z [4A, 4B, 4E]
C 3B5	141P134020	CAPACITOR(C)	F50V 0.1μF-Z [4A, 4B, 4E]
C 3BA	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 3BB	189P122010	CAPACITOR(C)	10V 2.2μF-M
C 3BC	189P123010	CAPACITOR(C)	16V 1μF-M
C 3BD	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 3BE	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 3BF	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 3BG	181P508050	CAPACITOR(C)	0.4W 6.3V 22μF-M
C 3BH	181P508080	CAPACITOR(C)	0.4W 16V 10μF-M
C 3BL	141P135070	CAPACITOR(C)	F16V 1μF-Z
C 3BM	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 3BN	141P135070	CAPACITOR(C)	F16V 1μF-Z
C 3BP	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 3BQ	189P121020	CAPACITOR(C)	6.3V 4.7μF-M
C 3BR	189P121020	CAPACITOR(C)	6.3V 4.7μF-M
C 3BS	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 3BT	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 3BU	181P508050	CAPACITOR(C)	0.4W 6.3V 22μF-M

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
C 3BV	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 3C0	189P120050	CAPACITOR(C)	4V 22μF-M [4A, 4B, 4E]
C 3C1	154P326080	CAPACITOR(C)	SL50V 2200pF-J [4A, 4B, 4E]
C 3C2	189P120030	C-TANTALUM(C)	4V 10μF-M [4A, 4B, 4E]
C 3C3	141P142010	CAPACITOR(C)	B25V 0.01μF-K [4A, 4B, 4E]
C 3C4	189P122010	CAPACITOR(C)	10V 2.2μF-M [4A, 4B, 4E]
C 3C5	181P507080	CAPACITOR(C)	4V 33μF-M [4A, 4B, 4E]
C 3C6	141P136040	CAPACITOR(C)	F25V/16V 2.2μF-Z [4A, 4B, 4E]
C 3C7	172P341030	CAPACITOR(C)	16V 0.01μF-J [4A, 4B, 4E]
C 3C8	141P138060	CAPACITOR(C)	B25V 0.22μF-K [4A, 4B, 4E]
C 3C9	141P136040	CAPACITOR(C)	F25V/16V 2.2μF-Z
C 3CA	141P135070	CAPACITOR(C)	F16V 1μF-Z
C 3CB	141P135070	CAPACITOR(C)	F16V 1μF-Z
C 3CC	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 3CE	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 3CF	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 3CG	141P140090	CAPACITOR(C)	B50V 1000pF-K
C 3CH	154P342070	CAPACITOR(C)	CH50V 47pF-J
C 3CJ	154P342070	CAPACITOR(C)	CH50V 47pF-J
C 3CK	154P342010	CAPACITOR(C)	CH50V 27pF-J
C 3CM	141P135070	CAPACITOR(C)	F16V 1μF-Z
C 3CN	141P135070	CAPACITOR(C)	F16V 1μF-Z
C 3CP	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 3CQ	141P140090	CAPACITOR(C)	B50V 1000pF-K
C 3CR	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 3CS	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 3CT	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 3D0	141P143080	CAPACITOR(C)	F50V 0.01μF-Z [4A, 4B, 4E]
C 3D1	141P143080	CAPACITOR(C)	F50V 0.01μF-Z [4A, 4B, 4E]
C 3D2	141P135070	CAPACITOR(C)	F16V 1μF-Z [4A, 4B, 4E]
C 3D3	141P142010	CAPACITOR(C)	B25V 0.01μF-K [4A, 4B, 4E]
C 3D4	141P135080	CAPACITOR(C)	F25V 0.1μF-Z [4A, 4B, 4E]
C 3D5	141P143080	CAPACITOR(C)	F50V 0.01μF-Z [4A, 4B, 4E]
C 3D6	141P143080	CAPACITOR(C)	F50V 0.01μF-Z [4A, 4B, 4E]
C 3D7	154P354040	CAPACITOR(C)	SL50V 220pF-J [4A, 4B, 4E]
C 3D8	141P143080	CAPACITOR(C)	F50V 0.01μF-Z [4A, 4B, 4E]
C 3D9	141P143080	CAPACITOR(C)	F50V 0.01μF-Z [4A, 4B, 4E]
C 3DA	181P509000	CAPACITOR(C)	0.4W 25V 4.7μF-M
C 3DB	141P144000	CAPACITOR(C)	F25V 0.033μF-Z
C 3DD	154P343050	CAPACITOR(C)	CH50V 100pF-J
C 3DE	141P140090	CAPACITOR(C)	B50V 1000pF-K
C 3DF	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 3DG	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 3DL	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 3EC	141P144020	CAPACITOR(C)	F25V/16V 0.1μF-Z
C 3VA	154P341010	CAPACITOR(C)	CH50V 10pF-C
C 401	181P508050	CAPACITOR(C)	0.4W 6.3V 22μF-M
C 402	181P508050	CAPACITOR(C)	0.4W 6.3V 22μF-M
C 403	141P132030	CAPACITOR(C)	B50V 0.015μF-K
C 404	141P140090	CAPACITOR(C)	B50V 1000pF-K
C 405	141P140090	CAPACITOR(C)	B50V 1000pF-K
C 407	181P500030	CAPACITOR(C)	0.4W 6.3V 47μF-M
C 408	181P500030	CAPACITOR(C)	0.4W 6.3V 47μF-M
C 409	141P137080	CAPACITOR(C)	B50V 0.047μF-K
C 410	141P138050	CAPACITOR(C)	B25V 0.18μF-K
C 412	181P508080	CAPACITOR(C)	0.4W 16V 10μF-M
C 413	141P140020	CAPACITOR(C)	B50V 270pF-K
C 414	181P508080	CAPACITOR(C)	0.4W 16V 10μF-M
C 415	141P137080	CAPACITOR(C)	B50V 0.047μF-K
C 418	189P122010	CAPACITOR(C)	10V 2.2μF-M
C 419	141P139030	CAPACITOR(C)	B25V 0.1μF-K
C 420	141P141050	CAPACITOR(C)	B50V 3300pF-K
C 4AA	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 4AB	154P343050	CAPACITOR(C)	CH50V 100pF-J
C 4B0	141P136030	CAPACITOR(C)	F16V 1μF-Z
C 4B1	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 4B2	189P123010	CAPACITOR(C)	16V 1μF-M
C 4B3	141P142010	CAPACITOR(C)	B25V 0.01μF-K
C 4B4	141P139030	CAPACITOR(C)	B25V 0.1μF-K
C 4B5	181P509000	CAPACITOR(C)	0.4W 25V 4.7μF-M
C 4B6	181P509000	CAPACITOR(C)	0.4W 25V 4.7μF-M
C 4B7	181P509000	CAPACITOR(C)	0.4W 25V 4.7μF-M
C 4B8	154P343050	CAPACITOR(C)	CH50V 100pF-J
C 4C0	141P134010	CAPACITOR(C)	F50V 0.047μF-Z
C 4C1	154P325080	CAPACITOR(C)	SL50V 820pF-J
C 4C2	181P509090	CAPACITOR(C)	0.4W 50V 2.2μF-M
C 4C3	141P141050	CAPACITOR(C)	B50V 3300pF-K
C 4C4	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 4D0	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 4D1	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 4D2	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 4D3	141P136030	CAPACITOR(C)	F16V 1μF-Z
C 4D4	141P136030	CAPACITOR(C)	F16V 1μF-Z
C 4D5	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 4G0	141P139000	CAPACITOR(C)	B25V 0.056μF-K
C 4G1	141P132010	CAPACITOR(C)	B50V 0.01μF-K
C 4G2	154P352000	CAPACITOR(C)	SL50V 22pF-J
C 4G3	141P139030	CAPACITOR(C)	B25V 0.1μF-K
C 500	141P142010	CAPACITOR(C)	B25V 0.01μF-K [4A, 4B, 4E]
C 501	141P142010	CAPACITOR(C)	B25V 0.01μF-K [4A, 4B, 4E]
C 502	141P142010	CAPACITOR(C)	B25V 0.01μF-K [4A, 4B, 4E]
C 503	141P135070	CAPACITOR(C)	F16V 1μF-Z [4A, 4B, 4E]
C 505	154P343010	CAPACITOR(C)	CH50V 68pF-J [4A, 4B, 4E]
C 506	141P142040	CAPACITOR(C)	B25V/16V 0.018μF-K [4A, 4B, 4E]
C 507	141P139030	CAPACITOR(C)	B25V 0.1μF-K [4A, 4B, 4E]
C 508	141P142070	CAPACITOR(C)	B25V/16V 0.033μF-K [4A, 4B, 4E]
C 509	154P341030	CAPACITOR(C)	CH50V 12pF-J [4A, 4B, 4E]
C 510	141P139030	CAPACITOR(C)	B25V 0.1μF-K [4A, 4B, 4E]
C 511	141P139030	CAPACITOR(C)	B25V 0.1μF-K [4A, 4B, 4E]
C 512	141P139030	CAPACITOR(C)	B25V 0.1μF-K [4A, 4B, 4E]
C 513	181P508080	CAPACITOR(C)	0.4W 16V 10μF-M
C 514	141P139030	CAPACITOR(C)	B25V 0.1μF-K [4A, 4B, 4E]
C 515	141P139030	CAPACITOR(C)	B25V 0.1μF-K [4A, 4B, 4E]
C 516	141P139030	CAPACITOR(C)	B25V 0.1μF-K [4A, 4B, 4E]
C 517	141P135070	CAPACITOR(C)	F16V 1μF-Z
C 518	181P508080	CAPACITOR(C)	0.4W 16V 10μF-M [4A, 4B, 4E]

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
C 519	141P142010	CAPACITOR(C)	B25V 0.01μF-K [4A, 4B, 4E]
C 520	141P135070	CAPACITOR(C)	F16V 1μF-Z
C 521	141P135080	CAPACITOR(C)	F25V 0.1μF-Z [4A, 4B, 4E]
C 522	154P341030	CAPACITOR(C)	CH50V 12pF-J [4A, 4B, 4E]
C 523	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 524	154P344010	CAPACITOR(C)	CH50V 180pF-J [4A, 4B, 4E]
C 525	141P140090	CAPACITOR(C)	B50V 1000pF-K
C 5A2	172P341090	CAPACITOR(C)	16V 0.033μF-J
C 5A3	141P136030	CAPACITOR(C)	F16V 1μF-Z
C 5A4	154P341030	CAPACITOR(C)	CH50V 12pF-J
C 5A5	154P341070	CAPACITOR(C)	CH50V 18pF-J
C 5A6	141P137060	CAPACITOR(C)	B50V 0.033μF-K
C 5A8	181P502060	CAPACITOR(C)	16V 47μF-M
C 5AA	181P508050	CAPACITOR(C)	0.4W 6.3V 22μF-M
C 5AB	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 5AC	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 5AD	181P508050	CAPACITOR(C)	0.4W 6.3V 22μF-M
C 5AE	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 5AG	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 5AH	189P125030	CAPACITOR(C)	25V 1μF-M
C 5AJ	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 5AK	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 5AL	141P135070	CAPACITOR(C)	F16V 1μF-Z
C 5AM	141P135070	CAPACITOR(C)	F16V 1μF-Z
C 5AN	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 5AP	141P135070	CAPACITOR(C)	F16V 1μF-Z
C 5AQ	141P135070	CAPACITOR(C)	F16V 1μF-Z
C 5AR	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 5AS	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 5AT	141P135070	CAPACITOR(C)	F16V 1μF-Z
C 5AU	181P508050	CAPACITOR(C)	0.4W 6.3V 22μF-M
C 5CB	154P341030	CAPACITOR(C)	CH50V 12pF-J
C 5D0	181P500080	CAPACITOR(C)	0.4W 10V 33μF-M
C 5E0	154P353060	CAPACITOR(C)	SL50V 100pF-J
C 5E1	154P353060	CAPACITOR(C)	SL50V 100pF-J
C 5E2	154P353060	CAPACITOR(C)	SL50V 100pF-J
C 5E3	154P353060	CAPACITOR(C)	SL50V 100pF-J
C 5FA	154P343050	CAPACITOR(C)	CH50V 100pF-J
C 5FB	154P343050	CAPACITOR(C)	CH50V 100pF-J
C 5FC	154P344050	CAPACITOR(C)	CH25V/50V
C 5FD	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 5FE	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 5FG	154P342030	CAPACITOR(C)	CH50V 33pF-J
C 5FH	154P342030	CAPACITOR(C)	CH50V 33pF-J
C 5FL	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 5FM	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 5FP	154P329020	CAPACITOR(C)	SL50V/25V 4700pF-J
C 5FQ	154P329020	CAPACITOR(C)	SL50V/25V 4700pF-J
C 5FS	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 5FT	141P141050	CAPACITOR(C)	B50V 3300pF-K
C 5FU	181P500080	CAPACITOR(C)	0.4W 10V 33μF-M
C 5FY	181P508050	CAPACITOR(C)	0.4W 6.3V 22μF-M
C 5FZ	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 5GA	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 5GB	141P135080	CAPACITOR(C)	F25V 0.1μF-Z

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
C 5GC	141P135070	CAPACITOR(C)	F16V 1μF-Z
C 5GD	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 5GE	141P135070	CAPACITOR(C)	F16V 1μF-Z
C 5KB	189P121010	CAPACITOR(C)	6.3V 3.3μF-M
C 5LA	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 5LB	141P140090	CAPACITOR(C)	B50V 1000pF-K
C 5LC	141P139030	CAPACITOR(C)	B25V 0.1μF-K
C 5LD	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 5LE	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 5RA	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 5ZA	141P135090	CAPACITOR(C)	F25V 0.22μF-Z
C 5ZB	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 6A0	141P139030	CAPACITOR(C)	B25V 0.1μF-K
C 6A1	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 6A3	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 6A4	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 6A5	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 6A6	141P135080	CAPACITOR(C)	F25V 0.1μF-Z
C 6A7	181P508000	CAPACITOR(C)	0.4W 4V 100μF-M
C 6A8	141P143080	CAPACITOR(C)	F50V 0.01μF-Z
C 6A9	181P509020	CAPACITOR(C)	0.4W 35V 2.2μF-M
C 6AA	141P141080	CAPACITOR(C)	B50V 5600pF-K [4A, 4B, 4E]
C 6AB	181P515000	ELECTROLYTIC-C(C)	35V 10μF-M [4A, 4B, 4E]
C 6AD	141P137040	CAPACITOR(C)	B25V 0.022μF-K[4A, 4B, 4E]
C 6AF	141P141080	CAPACITOR(C)	B50V 5600pF-K [4A, 4B, 4E]
C 6AG	181P515000	ELECTROLYTIC-C(C)	35V 10μF-M [4A, 4B, 4E]
C 6AJ	181P508050	CAPACITOR(C)	0.4W 6.3V 22μF-M [4A, 4B, 4E]
C 6AL	181P508050	CAPACITOR(C)	0.4W 6.3V 22μF-M [4A, 4B, 4E]
C 6AM	141P137040	CAPACITOR(C)	B25V 0.022μF-K[4A, 4B, 4E]
C 6AN	181P508050	CAPACITOR(C)	0.4W 6.3V 22μF-M [4A, 4B, 4E]
C 6AP	181P508050	CAPACITOR(C)	0.4W 6.3V 22μF-M [4A, 4B, 4E]
C 6AQ	181P508050	CAPACITOR(C)	0.4W 6.3V 22μF-M [4A, 4B, 4E]
C 6AR	181P508050	CAPACITOR(C)	0.4W 6.3V 22μF-M [4A, 4B, 4E]
C 6AU	181P509070	CAPACITOR(C)	0.4W 50V 0.47μF-M [4A]
C 6AU	181P509050	CAPACITOR(C)	0.7W 50V 0.22μF-M[4B, 4E]
C 6AV	181P509070	CAPACITOR(C)	0.4W 50V 0.47μF-M [4A]
C 6AV	181P509050	CAPACITOR(C)	0.7W 50V 0.22μF-M[4B, 4E]
C 6B0	141P135000	CAPACITOR(C)	F25V 0.22μF-Z
C 6B1	181P509080	CAPACITOR(C)	0.4W 50V 1μF-M
C 6B2	181P509080	CAPACITOR(C)	0.4W 50V 1μF-M
C 6B3	141P135000	CAPACITOR(C)	F25V 0.22μF-Z
C 6B4	141P135000	CAPACITOR(C)	F25V 0.22μF-Z
C 6B5	141P135000	CAPACITOR(C)	F25V 0.22μF-Z
C 6B6	141P135000	CAPACITOR(C)	F25V 0.22μF-Z
C 6B7	189P122050	CAPACITOR(C)	10V 10μF-M
C 6B8	141P136030	CAPACITOR(C)	F16V 1μF-Z
C 6B9	141P132020	CAPACITOR(C)	B50V 0.012μF-K
C 6C0	189P122050	CAPACITOR(C)	10V 10μF-M
C 6C3	141P144020	CAPACITOR(C)	F25V/16V 0.1μF-Z
C 6C4	141P136040	CAPACITOR(C)	F25V/16V 2.2μF-Z

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION	
C 6C5	189P124040	CAPACITOR(C)	20V 2.2μF-M	
C 6C6	141P131080	CAPACITOR(C)	B50V 5600pF-K	
C 6C7	154P340050	CAPACITOR(C)	CH50V 4pF-C	
C 6D1	141P135080	CAPACITOR(C)	F25V 0.1μF-Z	
C 6D2	141P144020	CAPACITOR(C)	F25V/16V 0.1μF-Z	
C 6D3	141P135080	CAPACITOR(C)	F25V 0.1μF-Z	
C 6D4	154P341010	CAPACITOR(C)	CH50V 10pF-C	
C 6D5	141P136030	CAPACITOR(C)	F16V 1μF-Z	
C 6D6	141P136030	CAPACITOR(C)	F16V 1μF-Z	
C 6D7	141P136030	CAPACITOR(C)	F16V 1μF-Z	
C 6D8	141P136030	CAPACITOR(C)	F16V 1μF-Z	
C 6E1	189P122050	CAPACITOR(C)	10V 10μF-M	
C 6E2	141P143080	CAPACITOR(C)	F50V 0.01μF-Z	
C 6E3	189P122050	CAPACITOR(C)	10V 10μF-M	
C 6E4	154P353000	CAPACITOR(C)	SL50V 56pF-J	
C 6E5	154P353000	CAPACITOR(C)	SL50V 56pF-J	
C 6ZA	141P139010	CAPACITOR(C)	B25V 0.068μF-K	[4A]
C 6ZB	141P137080	CAPACITOR(C)	B50V 0.047μF-K	[4A]
C 6ZC	141P137080	CAPACITOR(C)	B50V 0.047μF-K	[4A]
C 6ZD	141P139030	CAPACITOR(C)	B25V 0.1μF-K	[4A]
C 6ZE	141P139010	CAPACITOR(C)	B25V 0.068μF-K	[4A]
C 6ZF	141P137080	CAPACITOR(C)	B50V 0.047μF-K	[4A]
C 6ZG	141P137080	CAPACITOR(C)	B50V 0.047μF-K	[4A]
C 6ZH	141P139030	CAPACITOR(C)	B25V 0.1μF-K	[4A]
C 800	141P144000	CAPACITOR(C)	F25V 0.033μF-Z	
C 801	141P143080	CAPACITOR(C)	F50V 0.01μF-Z	
C 803	154P341050	CAPACITOR(C)	CH50V 15pF-J	
C 804	154P341050	CAPACITOR(C)	CH50V 15pF-J	
C 805	154P342050	CAPACITOR(C)	CH50V 39pF-J	
C 806	141P135070	CAPACITOR(C)	F16V 1μF-Z	
C 807	181P500080	CAPACITOR(C)	0.4W 10V 33μF-M	
C 808	141P135070	CAPACITOR(C)	F16V 1μF-Z	
C 809	181P500040	CAPACITOR(C)	6.3V 100μF-M	
C 810	141P140090	CAPACITOR(C)	B50V 1000pF-K	
C 812	141P140010	CAPACITOR(C)	B50V 220pF-K	
C 901	141P139030	CAPACITOR(C)	B25V 0.1μF-K	
C 907	141P142010	CAPACITOR(C)	B25V 0.01μF-K	
C 908	189P123010	CAPACITOR(C)	16V 1μF-M	
C 909	141P141050	CAPACITOR(C)	B50V 3300pF-K	
C 910	154P355060	CAPACITOR(C)	SL25V 680pF-J	
C 911	141P142010	CAPACITOR(C)	B25V 0.01μF-K	
C 917	181P502060	CAPACITOR(C)	16V 47μF-M	
C 918	181P500080	CAPACITOR(C)	0.4W 10V 33μF-M	
C 919	181P505000	CAPACITOR(C)	0.4W 35V 10μF-M	
C 922	141P139030	CAPACITOR(C)	B25V 0.1μF-K	
VC2AA	202P220010	CAPACITOR(C)	3pF-10pF	
VC500	202P220040	TRIMMER CAPACITOR(C)	9pF-40pF 4KA	[4A, 4B, 4E]
VC6A1	202P220020	TRIMMER CAPACITOR(C)	5pF-20pF 4KA	
VC800	202P220050	TRIMMER CAPACITOR(C)	13pF-50pF 4K	

SWITCHES

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
S 2000	432P088010	KEY BOARD SWITCH	EJECT
S 711	432P094010	KEY BOARD SWITCH	FF
S 713	432P093010	KEY BOARD SWITCH	PB
S 715	432P094010	KEY BOARD SWITCH	REW
S 717	432P093010	KEY BOARD SWITCH	STOP
S 721	432P093010	KEY BOARD SWITCH	STILL
S 725	432P090010	KEY BOARD SWITCH	START/STOP
S 730	431C074050	SLIDE SWITCH	POWER SW
SW571	439P027010	LEAF SWITCH	
SW573	439P013020	LIMIT SWITCH	
SW574	439P026010	MODE SWITCH	

MISCELLANEOUS

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION	
	939P450030	AC ADAPTER		[1A, 4A]
	939P450020	AC ADAPTER		[1B, 4B]
	939P450010	AC ADAPTER		[1E, 4E]
	215B511030	FPC CABLE	VA-CA	
	215B511040	FPC CABLE	VB-SB	
	215B511050	FPC CABLE	VS-JS	
	440C227020	JACK BOARD		
	451C137010	EARPHONE JACK		
	295P291010	RF CONVERTER	DAR-M1A	[1A, 4A]
	295P290010	RF CONVERTER	DAR-M1EB	[1B, 4B]
IC2DA	272D008010	CCD-ASSY		
M 571	288P103020	CAPSTAN MOTOR		
M 572	288P105020	LOADING MOTOR		
T 571	460P103020	A/C HEAD		
TP 25	299P136090	TEST POINT		
TP 2A	299P136090	TEST POINT		
TP 2C	299P136090	TEST POINT		
TP 2E	299P136090	TEST POINT		
TP 2K	299P136090	TEST POINT		
TP 2M	299P136090	TEST POINT		
TP 2S	299P136090	TEST POINT		
TP 2V	299P136090	TEST POINT		
TP 2Y	299P136090	TEST POINT		
TP 3A	299P136090	TEST POINT		[4A, 4B, 4E]
TP 3E	299P136090	TEST POINT		
TP 3F	299P136090	TEST POINT		
TP 3H	299P136090	TEST POINT		[4A, 4B, 4E]
TP 3L	299P136090	TEST POINT		[4A, 4B, 4E]
TP 3R	299P136090	TEST POINT		[4A, 4B, 4E]
TP 3Y	299P136090	TEST POINT		[4A, 4B, 4E]
TP 5A	299P136090	TEST POINT		
TP 5P	299P136090	TEST POINT		
TP 5Q	299P136090	TEST POINT		
TP 5R	299P136090	TEST POINT		
TP 5S	299P136090	TEST POINT		
TP 5X	299P136090	TEST POINT		
TP 6J	299P136090	TEST POINT		
TP 6X	299P136090	TEST POINT		
TP 8A	299P136090	TEST POINT		
TP 8D	299P136090	TEST POINT		
TP 8E	299P136090	TEST POINT		
TP2AA	299P136090	TEST POINT		
TP2AB	299P136090	TEST POINT		
TP2X1	299P136090	TEST POINT		
TP2X2	299P136090	TEST POINT		
TP3AA	299P136090	TEST POINT		

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
TP3AB	299P136090	TEST POINT	
TP3AE	299P136090	TEST POINT	
TP3AG	299P136090	TEST POINT	
TP3AJ	299P136090	TEST POINT	
TP3AL	299P136090	TEST POINT	
TP3AM	299P136090	TEST POINT	
TP3AN	299P136090	TEST POINT	
TP3AP	299P136090	TEST POINT	
TP3AQ	299P136090	TEST POINT	
TP3AR	299P136090	TEST POINT	
TP3AS	299P136090	TEST POINT	
TP3AT	299P136090	TEST POINT	
TP3AY	299P136090	TEST POINT	
TP3X1	299P136090	TEST POINT	[4A, 4B, 4E]
TP500	299P136090	TEST POINT	[4A, 4B, 4E]
TP5GA	299P136090	TEST POINT	
TP5GD	299P136090	TEST POINT	
TP5GU	299P136090	TEST POINT	
TP5HL	299P136090	TEST POINT	
X 2AA	285P165010	CRYSTAL RESONATOR	19.3125MHz
X 5A0	285P102030	CRYSTAL RESONATOR	AT-49
X 6A1	285P167010	CRYSTAL RESONATOR	HC-49/U-S
X 800	285P054020	CRYSTAL RESONATOR	
Z 571	299P168010	DEW SENSOR	SHS-A3
Z 5A0	299P137010	PROTECTOR(C)	1A
Z 5AA	299P137010	PROTECTOR(C)	1A
Z 6AA	299P162010	ANGLE SENSOR	ENC-05S-01 [4A, 4B, 4E]
Z 6AB	299P162010	ANGLE SENSOR	ENC-05S-01 [4A, 4B, 4E]
Z 901	299P137010	PROTECTOR(C)	1A
Z 903	299P137040	SURGE ABSORBER	0.4A

PRINTED CIRCUIT BOARD ASSY'S

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
	928C722004	CCD PCB ASSY	
	928C724004	CM PCB ASSY	[1A, 1B, 1E]
	928C724005	CM PCB ASSY	[4A, 4B, 4E]
	928D041030	EVF PCB ASSY	
	928C749001	GYRO SENS PCB ASSY	[4A, 4B, 4E]
	928C725001	POWER SW PCB ASSY	
	928C747002	REAR PCB ASSY	[1A, 1B, 1E]
	928C747003	REAR PCB ASSY	[4A, 4B, 4E]
	928C723006	SD/PC PCB ASSY	[1A, 1B, 1E]
	928C723005	SD/PC PCB ASSY	[4A, 4B, 4E]
	928C746003	VTR SW PCB ASSY	
	927B512001	VTR PCB ASSY	[1A, 1B, 1E]
	927B512002	VTR PCB ASSY	[4A, 4B, 4E]
	928C719003	VTR-SUB PCB ASSY	
	939P439020	CAMERA SW UNIT	FADE

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION

12. AC POWER ADAPTER

INTEGRATED CIRCUITS

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
IC 101	266D113040	IC	FA5311S
IC 201	267D001010	IC	

TRANSISTORS

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
Q 101	260D213040	TRANSISTOR	2SK1572/2SK1821
Q 201	260D213050	TRANSISTOR	
Q 202	260D213060	TRANSISTOR	

DIODES

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
D 104	264D121030	DIODE	ERA22-08
D 101	264D141040	DIODE	S1WB60S
D 102	264D141050	DIODE	ERA91-02AL01Z
D 103	264D141050	DIODE	ERA91-02AL01Z
D 201	264D141080	DIODE	
D 202	264D141090	DIODE	
PD 201	264D124040	DIODE	
PD 202	264D124040	DIODE	
ZD 101	264D141060	DIODE	
ZD 102	264D141070	DIODE	
ZD 103	264D141070	DIODE	
ZD 201	264D124050	DIODE	

COILS

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
L 101	351D046010	CHOKE COIL	18mH
L 102	351D046010	CHOKE COIL	18mH
L 201	351D046020	CHOKE COIL	10μH

TRANSFORMERS

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
T 101	350D041050	TRANS	

RESISTORS

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
R 102	103P401030	CHIP RESISTOR	1/10W 100Ω
R 104	103P400090	CHIP RESISTOR	1/10W 47Ω
R 108	103P354090	CHIP RESISTOR	1/8W 100kΩ
R 108	103P354090	CHIP RESISTOR	1/8W 100kΩ
R 109	103P354090	CHIP RESISTOR	1/8W 100kΩ
R 110	103P355030	CHIP RESISTOR	1/8W 220kΩ
R 111	103P402000	CHIP RESISTOR	1/10W 390Ω
R 113	103P403050	CHIP RESISTOR	1/10W 6.8kΩ
R 115	103P354090	CHIP RESISTOR	1/8W 100kΩ
R 116	103P354090	CHIP RESISTOR	1/8W 100kΩ
R 117	103P355030	CHIP RESISTOR	1/8W 220kΩ
R 118	103P355030	CHIP RESISTOR	1/8W 220kΩ
R 119	103P355030	CHIP RESISTOR	1/8W 220kΩ
R 201	103P401090	CHIP RESISTOR	1/10W 330Ω
R 203	103P400050	CHIP RESISTOR	1/10W 22Ω
R 206	103P405060	CHIP RESISTOR	1/10W 390kΩ

CAPACITORS

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
C 110	185D070010	ELECTORLYTIC-C	400V 47μF

MISCELLANEOUS

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
PC 101	268D015020	PHOTO COUPLER	
CN 201	451D057020	JACK	
F 101	283D086050	FUSE	250V 1.6A [1E, 4E]
F 101	283D086060	FUSE	250V 1.6A [1A, 1B, 4A, 4E]

COSMETIC PARTS

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
	242D410050	AC POWER CORD	[1A, 4A]
	242D410040	AC POWER CORD	[1B, 4B]
	242D410030	AC POWER CORD	[1E, 4E]
	700D028030	CASE (TOP)	
	700D029050	CASE (BOTTOM)	[1A, 4A]
	700D029040	CASE (BOTTOM)	[1B, 4B]
	700D029030	CASE (BOTTOM)	[1E, 4E]

Note :
Broken AC power cord must be exchanged with a new original power cord.

〔MEMO〕

Printed in Japan

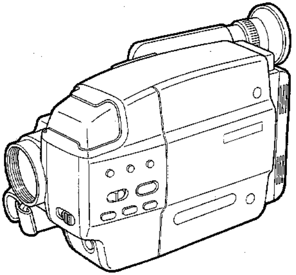
1991

MITSUBISHI

Service Manual

VIDEO CAMERA / RECORDER

CIRCUIT DIAGRAMS



VHS C

MODEL

HS-CX1(A)
HS-CX1(B)
HS-CX1(E)
HS-CX4(A)
HS-CX4(B)
HS-CX4(E)

- ● Only cassettes marked VHS-C can be used with this VIDEO CAMERA/RECORDER.
- ● Design and specifications are subject to change without notice.

MITSUBISHI ELECTRIC

871C509O30
Printed in Japan

DC VOLTAGE TABLES (FULL AUTO, SP MODE)

PCB-CM

IC 4AA

PIN No.	
1	0.1V
2	—
3	—
4	—
5	—
6	0.5~1.5V
7	—
8	—
9	3~4V
10	—
11	—
12	—
13	—
14	4.8V
15	—
16	—
17	0V
18	—
19	—
20	0.1V
21	—
22	0V
23	—
24	—
25	4.8V
26	0.1V
27	0.8~1.5V
28	4.4V
29	4.8V
30	0V
31	—
32	—
33	—
34	0V
35	0V
36	0V
37	0V
38	2.4V
39	4.8V
40	—
41	—
42	0.4V
43	—
44	—

IC 5AE

PIN No.	
1	0V
2	
3	4.8V
4	1.8V
5	1.8V
6	1.8V
7	1.2V
8	2V
9	1.8V
10	1.8V
11	1.8V
12	0V
13	0V
14	0V

IC 5AA

PIN No.		PIN No.	
1	—	41	—
2	0V	42	0V
3	0~3V	43	4.7V
4	4.8V	44	0~2V
5	0V	45	0.3V
6	0V	46	0V
7	0V	47	0V
8	4.8V	48	~
9	0V	49	4.7V
10	~	50	4.8V
11	~	51	0V
12	4.8V	52	0V
13	4.8V	53	0V
14	4.7V	54	0V
15	4.8V	55	0V
16	4.8V	56	0V
17	4~5V	57	0V
18	0.5V	58	2.3V
19	0V	59	2.5V
20	—	60	2V
21	—	61	0V
22	—	62	4.8V
23	—	63	0V
24	—	64	3.6V
25	0V	65	4.3V
26	4.8V	66	4.8V
27	—	67	2.4V
28	2.2V	68	4.8V
29	—	69	4.8V
30	—	70	0V
31	—	71	4.8V
32	0V	72	4.8V
33	4.8V	73	0V
34	0V	74	0.5V
35	0V	75	4.8V
36	~	76	4.8V
37	0V	77	4.8V
38	4.8V	78	0V
39	0V	79	~
40	0.8~2V	80	—

IC 5AB

PIN No.	
1	0V
2	0V
3	0V
4	0V
5	1.8V
6	1.8V
7	2.2V
8	4.8V

IC 5AC

PIN No.	
1	1.8V
2	1.8V
3	1.8V
4	4.8V
5	1.8V
6	1.9V
7	1.9V
8	1.8V
9	1.8V
10	1.8V
11	0V
12	1.8V
13	1.8V
14	1.8V

IC 5EA

PIN No.	
1	—
2	4.8V
3	0V
4	4.8V
5	~
6	0.1V
7	0V
8	3V

IC 5FA

PIN No.	
1	—
2	1.9V
3	0V
4	4.8V
5	0~3V
6	—
7	0V
8	4.8V
9	—
10	—
11	0V
12	—
13	4.8V
14	6.5V
15	~
16	—
17	-0.1V
18	-0.1V
19	~
20	~
21	0.1V
22	—
23	0V
24	—
25	~
26	—
27	6.5V
28	4.8V
29	—
30	4.8V

IC 5GA

PIN No.		PIN No.	
1	4.8V	33	0.8~1.5V
2	4.8V	34	0.8~1.5V
3	4.8V	35	4.8V
4	2.1V	36	0.7V
5	4.8V	37	0V
6	0.6V	38	0.6V
7	0V	39	0V
8	0.7V	40	0.7V
9	0V	41	0V
10	0V	42	0.6V
11	0V	43	0.6V
12	0V	44	0V
13	0V	45	0.7V
14	0V	46	0~1.5V
15	0V	47	0~1.5V
16	0V	48	1.2V
17	0~0.5V	49	4.8V
18	0.1V	50	0V
19	0.1V	51	0V
20	2.3V	52	0~1.2V
21	2.4V	53	4.8V
22	0V	54	0.8~2V
23	2V	55	2.2V
24	0V	56	4.8V
25	4.8V	57	0V
26	2.4V	58	2.1V
27	4.8V	59	-0.1V
28	0.4V	60	~
29	0.4V	61	0V
30	0.7V~1.2V	62	0V
31	0.6V~1.2V	63	0V
32	0V	64	0V

IC 5LB

PIN No.	
1	1.8v
2	1.8v
3	0v
4	4.8v
5	4.8v

IC 5RA

PIN No.	
1	4.8v
2	0v
3	4.8v

IC 5LA

PIN No.	
1	1.9V
2	2V
3	2V
4	4.8V
5	4.3V
6	1V
7	3.6V
8	1.8V
9	1.8V
10	1.8V
11	0V
12	1.9V
13	1.8V
14	3.6V

TRANSISTOR

SYMBOL	1	2	3	4	5
Q 5AE	1.8V	1.8V	0V	1.8V	0V
Q 5AG	1.8V	1.8V	0.1V	1.8V	0.1V

TRANSISTOR

SYMBOL	1	2	3	4	5	6
Q 5AC	4.8V	2.4V	1.8V	4.8V	4.8V	4.2V
Q 5GA	4.8V	1.3V	0.7V	4.8V	2.7V	2.1V

TRANSISTOR

SYMBOL	(E)	(B)	(C)
Q 5AB	4.8V	4.7V	4.8V
Q 5AD	0V	0.5~1.5V	1.2V
Q 5FC	0.7V	1.4V	1.6V
Q 5FD	2V	2.7V	4.8V
Q 5FE	2.5V	1.9V	0V
Q 5FG	2.5V	1.9V	0V
Q 5FH	0.6V	1.2V	4.8V
Q 5FJ	0.7V	1.2V	4.8V
Q 5FL	1.3V	0.7V	0V
Q 5LB	2.9V	3.6V	3.9V
Q 5LC	4.8V	4.8V	0V

IC 5ZA

PIN No.	
1	-0.1V
2	-0.1V
3	0V
4	6.5V
5	0.9V
6	—
7	0V
8	0V

PCB-GYRO-SENS (LENS CAP ON)

IC 6AA

PIN No.	
1	2.3V
2	2.3V
3	2.3V
4	4.9V
5	2.2V
6	2.3V
7	2.3V
8	2.3V
9	2.3V
10	2.2V
11	0V
12	2.3V
13	2.3V
14	2.4V

TRANSISTOR

SYMBOL	(E)	(B)	(C)
Q 6AB	2.3V	0V	4.9V
Q 6AC	4.9V	4.9V	0V

TRANSISTOR

SYMBOL	1	2	3	4	5	6
Q 6AA	4.9V	2.9V	2.3V	4.9V	3V	2.3V

SENSOR-DRIVE (LENS-CAP ON)

IC 2AA

PIN No.		PIN No.	
1	2.4V	23	0V
2	0V	24	4.9V
3	0V	25	4.9V
4	0V	26	2.8V
5	0V	27	2.3V
6	—	28	0.9V
7	0V	29	0V
8	2.5V	30	2.4V
9	—	31	2.3V
10	0.1V	32	1.2V
11	0.2V	33	1.2V
12	2.4V	34	0V
13	0.4V	35	2.4V
14	0.1V	36	2.4V
15	0.1V	37	0V
16	0.1V	38	0V
17	4.9V	39	0V
18	0V	40	4.9V
19	4.7V	41	0.8V
20	4.7V	42	0.8V
21	4.9V	43	0V
22	4.9V	44	2.4V

IC 2AB

PIN No.	
1	-7.1V
2	-7.1V
3	0.6V
4	0V
5	-0.1V
6	4.8V
7	0.1V
8	4.9V
9	0.1V
10	4.9V
11	—
12	4.7V
13	4.9V
14	4.7V
15	0V
16	15V
17	-6.7V
18	-6.7V
19	0.9V
20	18V

IC 2AD

PIN No.	
1	—
2	2.5V
3	0V
4	2.4V
5	4.9V

IC 2AC

PIN No.	
1	4.9V
2	2.7V
3	2.7V
4	4.9V
5	1.2V
6	1.2V
7	0V
8	1.7V

TRANSISTOR

SYMBOL	(E)	(B)	(C)
Q 2AC	8.4V	8.3V	5.6V
Q 2AH	2.1V	2.8V	4.9V
Q 2AJ	15V	15.6V	18V
Q 2AK	2.4V	1.7V	0V

PCB-CCD (LENS CAP ON)

IC 2DA

PIN No.	
1	15V
2	3.8V
3	15V
4	10.2V
5	3.1V
6	4.4V
7	3.1V
8	3.9V
9	15V
10	7V
11	-7.9V
12	-0.1V
13	0.6V
14	-6.7V
15	-6.7V
16	0V

PROCESS (LENS CAP ON)

IC 3AA

PIN No.		PIN No.	
1	0V	41	1.9V
2	0.6V~1.2V	42	1.1V
3	1.8V	43	—
4	1V	44	1.8V
5	1.9V	45	0.7V
6	1.4V	46	3.1V
7	2.4V	47	1.9V
8	0V	48	1.8V
9	4.4V	49	1.8V
10	1.8V	50	3.2V
11	1.8V	51	2.1V
12	4.9V	52	2.2V
13	1.8V	53	1.8V
14	1.8V	54	4.9V
15	2.2V	55	—
16	1.9V	56	2.8V
17	1.9V	57	1.8V
18	1.6V	58	—
19	2.4V	59	1.8V
20	3.1V	60	1.8V
21	2.3V	61	1.8V
22	0V	62	—
23	—	63	2.5V
24	1.8V	64	0V
25	2.3V	65	1.2V
26	3.2V	66	1.7V
27	—	67	1V
28	1.8V	68	3V
29	1.8V	69	1V
30	3.2V	70	1.8V
31	1.9V	71	1.8V
32	3.2V	72	1.8V
33	2V	73	0.6V
34	1.8V	74	3.1V
35	1.9V	75	3.1V
36	1.8V	76	2.1V
37	—	77	1.9V
38	3.2V	78	1.8V
39	1.6V	79	2.9V
40	1.8V	80	2.1V

IC 3AB

PIN No.	
1	-2.4V
2	—
3	—
4	2.3V
5	2.5V
6	1.9V
7	—
8	—
9	—
10	0V
11	—
12	—
13	2.2V
14	—
15	4.9V
16	8.4V

IC 3AD

PIN No.	
1	0V
2	2.8V
3	1.8V
4	2.7V
5	1.6V
6	1.5V
7	1.1V
8	1.5V
9	3.1V
10	4.9V
11	4.9V
12	1.9V
13	1.4V
14	~
15	0V
16	4.8V
17	~
18	1.9V
19	1.9V
20	0V

IC 3AC

PIN No.	
1	0V
2	2.4V
3	8.4V
4	—
5	—
6	5V
7	2V
8	2.1V
9	2.1V
10	0V
11	2V
12	—
13	—
14	2.4V
15	2.5V
16	2.4V

IC 3AE

PIN No.	
1	0V
2	2.6V
3	0V
4	2.3V
5	2V
6	0.1V
7	0.1V
8	1.8V
9	3.3V
10	4.9V
11	4.9V
12	2.8V
13	2V
14	~
15	0V
16	4.7V
17	~
18	2.3V
19	1.6V
20	0V

TRANSISTOR

SYMBOL	(E)	(B)	(C)
Q 3AD	3V	3.6V	4.9V
Q 3AG	1.3V	2V	4.9V
Q 3AH	3V	2.4V	0V
Q 3AJ	3.1V	3.7V	4.9V
Q 3AK	1.8V	2.4V	4.9V
Q 3AL	1.8V	0V	0V
Q 3AQ	0V	4.8V	0V
Q 3AY	1.2V	1.8V	4.9V
Q 3AZ	1.8V	1V	1.8V
Q 3BB	1.8V	0.2V	1.8V
Q 3BD	0V	0V	1.8V
Q 3BG	1.3V	1.9V	4.9V
Q 3BJ	0V	0.1V	2~3V

TRANSISTOR

SYMBOL	1	2	3	4	5
Q 3AN	1.8V	1.8V	2~3V	1.8V	0V
Q 3AP	0V	0V	4.8V	0V	4.8V
Q 3BC	4.2V	0V	4.2V	0V	0V

TRANSISTOR

SYMBOL	1	2	3	4	5	6
Q 3AM	0V	7.7V	0V	8.4V	0.6V	0V
Q 3AS	0V	2.7V	2.4V	0V	1.8V	2.4V
Q 3AW	4.9V	1.2V	1.8V	0V	1.8V	1.2V
Q 3BF	4.9V	1.8V	1.2V	4.9V	0V	1.2V
Q 3BH	4.9V	3.1V	3.7V	0V	3.7V	3.1V

The voltages parenthesised are on SP recording mode.
While those without parenthesised on SP play back mode.

CHROMA

IC 6A1

Pin		Pin		Pin		Pin	
1	3.4V(3.8V)	17	2.1V	33	~	49	2.5V
2	0.5V	18	1.5V	34	0V	50	2.2V
3	2.6V	19	0V	35	0.4V	51	0V
4	0V	20	1.5V	36	4.8V	52	3V(2.6V)
5	0V	21	2.1V	37	~	53	5V
6	0V	22	2.1V	38	4.8V	54	5V
7	3V	23	1.6V(2.3V)	39	0.2V	55	0V
8	3.4V(3.8V)	24	2.1V	40	3.4V	56	2.3V(1.9V)
9	2.3V	25	0.9V	41	2.2V	57	0V
10	2.7V(4.2V)	26	4.8V(2.3V)	42	2.5V	58	3.1V
11	3V(4.1V)	27	0V(0.3V)	43	2.1V	59	2.8V
12	4.8V	28	0V	44	0V	60	2.9V
13	2V	29	0V	45	2.5V	61	4.8V
14	1.6V	30	0V(4.3V)	46	2.5V	62	2.6V
15	3V	31	0.4V	47	2.5V(1.8V)	63	4.2V(3V)
16	2.1V	32	0V	48	3V	64	1.6V

TRANSISTOR

SYMBOL	(E)	(B)	(C)
Q6A3	0V	0V	0.4V
Q6A4	4.2V	5V	5V
Q6A5	4.8V	0.1V(5V)	4.8V(2.3V)

TRANSISTOR

SYMBOL	1	2	3	4	5
Q6A1	0V(0.2V)	0V(0.3V)	2.6V(0V)	0V	2.6V(0V)

TELOP

IC 502

Pin	
1	—
2	0V
3	0.7V(1.6V)
4	0.7V(0.1V)
5	2.2V
6	5V
7	3.4V(2.6V)
8	—
9	—
10	1V(1.8V)
11	0.7V(1.6V)
12	0V
13	5V
14	0V
15	0V
16	—
17	—
18	1.6V
19	1.4V
20	0V
21	0.9V
22	0.9V
23	0.9V
24	—
25	—
26	1.6V
27	1.6V
28	1.4V
29	2.3V
30	0.7V(1.6V)
31	0.7V(1.6V)
32	—

IC 500

Pin	
1	—
2	1~3V
3	2~3V
4	2~3V
5	2~3V
6	2.5V
7	2.4V
8	2.5V
9	2V
10	2V
11	0.2V
12	0.2V
13	0.2V
14	0V
15	0.2V
16	0.2V
17	0.2V
18	0.2V
19	0.2V
20	0V
21	1~3V
22	0V
23	1~3V
24	2~3V
25	2~3V
26	0V
27	5V
28	5V

IC 501

Pin		Pin	
1	2.5V	23	5V
2	2.4V	24	0V
3	2.4V	25	0V
4	2~3V	26	5V
5	2~3V	27	—
6	2~3V	28	0V
7	1~3V	29	1~3V
8	—	30	2~3V
9	4.5V(5V)	31	1~3V
10	5V	32	0V
11	5V	33	1~3V
12	0V	34	0.2V
13	0V	35	0.2V
14	0V	36	0.3V
15	0V	37	0.3V
16	0V	38	0.3V
17	0V	39	5V
18	3.5V(0V)	40	2V
19	2.3V	41	2V
20	2.5V	42	0.2V
21	0V	43	0.2V
22	5V	44	0.2V

IC 503

Pin	
1	2.3V
2	0V
3	2.4V
4	0V
5	3V
6	5V
7	1.6V
8	0V

IC 504

Pin	
1	0V
2	1V(1.8V)
3	1.8V
4	0V
5	5V
6	5V
7	5V(1.7V)
8	5V

IC 505

Pin	
1	0V
2	5V
3	0V
4	0.4V
5	4.7V
6	0.3V
7	0V
8	0V
9	5V
10	0V
11	0V
12	5V
13	0V
14	5V

TRANSISTOR

SYMBOL	(E)	(E)	(E)
Q500	0V	0.2V	5V

TRANSISTOR

SYMBOL	1	2	3	4	5
Q501	5V	4.5V	0V	0V	0V

Y

IC 2A1

Pin		Pin		Pin		Pin	
1	2V	15	2.1V	29	5V	43	2.7V (0V)
2	2.5V	16	5V	30	2.4V	44	4.6V (1.3V)
3	3.1V(4.2V)	17	2.4V	31	2.4V	45	3.4V
4	2.1V(4.2V)	18	1.2V	32	3.7V (0.5V)	46	3.1V (4.3V)
5	2.7V	19	~	33	3V	47	5V
6	0.8V	20	0V	34	4.2V (1V)	48	5V
7	2.7V	21	0V	35	3.6V (0V)	49	0.4V
8	0V	22	2.7V	36	4.3V (5V)	50	0V
9	2.8V	23	0V	37	2.5V (4V)	51	3.7V (2.1V)
10	2.8V	24	3.1V	38	3V	52	3.1V (0V)
11	1.7V	25	3.8V	39	0.4V (0V)	53	3.7V (2V)
12	2.3V	26	4.3V (3V)	40	2.5V (0.4V)	54	0.2V
13	2V	27	0V	41	0.3V (0V)	55	2.1V
14	2.2V	28	4.8V	42	4.5V	56	2.7V

TRANSISTOR

SYMBOL	(E)	(B)	(C)
Q2P1	2.5V (0V)	3.3V (0V)	5V (0V)
Q2V0	5V	5V (4.2V)	0V (5V)
Q2V1	5V	4.3V (5V)	5V (0V)

IC 2P1

Pin	
1	—
2	0V
3	5V (0V)
4	3.3V (0V)
5	1.4V (0.1V)
6	2.6V (0V)
7	2.4V (0V)
8	—

IC 2R1

Pin	
1	0V
2	5V
3	2.3V
4	3.8V
5	2.1V
6	2.2V
7	2.3V
8	2.5V
9	5V
10	5V
11	5V
12	3V
13	3V
14	—
15	0V
16	4.7V
17	~
18	2.3V
19	2.5V
20	0V

HEAD-AMP

IC 201

Pin		Pin		Pin		Pin	
1	—	17	0.6V	33	0V (4~5V)	49	0~0.7V(0V)
2	0V (4.8V)	18	0V (3~5V)	34	1.4V	50	1.4V
3	—	19	0V	35	0~0.7V(0V)	51	4.8V
4	0V	20	0.6V	36	0.6V	52	~
5	2.4V (4V)	21	0~0.7V (~)	37	0V	53	~
6	4.7V	22	1.4V	38	0V (4~5V)	54	0~0.4V
7	0V (2.6V)	23	0V (3~5V)	39	0.6V	55	5V (0V)
8	0V (1.6V)	24	1.4V	40	0~0.7V(0V)	56	0V (5V)
9	—	25	0~0.7V (~)	41	1.3V	57	0V (1.6V)
10	4.4V (0V)	26	0.6V	42	0V (4~5V)	58	0V (2.7V)
11	0~0.4V	27	0V (3~5V)	43	1.3V	59	0~0.6V(0.8V)
12	~	28	0V	44	0~0.7V(0V)	60	0~0.6V(0.7V)
13	~	29	0.6V	45	0.6V	61	3.8V
14	4.7V	30	0~0.7V (~)	46	0V	62	2.4V (4V)
15	1.4V	31	1.4V (1V)	47	0V (4~5V)	63	3.8V
16	0~0.7V (~)	32	0V (3~5V)	48	0.6V	64	3.8V

TRANSISTOR

SYMBOL	(E)	(B)	(C)
Q202	0V (0.9V)	0V (1.6V)	0V (3.1V)
Q205	0V (2.5V)	0V (3.1V)	0V (5V)
Q291	0V (2.6V)	0V (2.1V)	0V
Q292	0V (4.4V)	0V (3.8V)	0V
Q294	0V (4.4V)	0V (3.8V)	0V

OPERATION

IC 800

Pin		Pin		Pin		Pin	
1	5V	21	5V	41	0.1V	61	0V
2	5V	22	4.8V	42	5V (0V)	62	0V
3	0.7V	23	4.8V	43	4~5V (0V)	63	4.4V (0V)
4	3.2V	24	4~5V	44	0V	64	—
5	4.5V	25	0.5V (0V)	45	5V	65	0V
6	0V	26	0.4V	46	4.5V	66	0V
7	~	27	0V	47	5V	67	—
8	4.3V	28	5V	48	5V	68	—
9	5V	29	5V	49	0V	69	0V
10	4~5V	30	2.2V	50	0V	70	2~4V
11	5V	31	1.1V	51	4.8V	71	3~4V
12	5V	32	0V	52	4.9V	72	5V
13	5V	33	3~5V	53	5V	73	0V
14	0V	34	0~0.6V(0~1V)	54	4.5V (0V)	74	4~5V
15	0V (5V)	35	0~0.6V(0~1V)	55	~	75	0.3V
16	2~3V	36	0~0.6V(0~1V)	56	5V	76	5V
17	~	37	0~0.6V(0~1V)	57	0V	77	0V
18	5V	38	0~0.6V(0~1V)	58	5V	78	0.1V
19	5V	39	—	59	5V (1.6V)	79	5V
20	5V	40	4.8V	60	5V	80	5V

TRANSISTOR

SYMBOL	(E)	(B)	(C)
Q802	0V	1.6V	0V

IC 803

Pin	
1	4.3V
2	5V
3	0V

IC 801

Pin	
1	5V
2	0V
3	6.5V

I/O REAR

IC 2001

Pin	
1	2.3V
2	0V
3	1V (3V)
4	0V
5	0V
6	5V
7	1.5V
8	0V

IC 2002

Pin	
1	2V
2	5V
3	2.3V
4	0V

TRANSISTOR

SYMBOL	(E)	(B)	(C)
Q2000	0V (3V)	0V (2.4V)	0V
Q2001	2.5V	3.2V	3.7V
Q2002	3V	3.7V	4.8V
Q2004	2.4V	0V (3.1V)	5V
Q2006	0V	0V (5V)	0.7V (0V)
Q2009	0V	0.7V (0V)	0V (1.3V)

MIC-AMP

IC 350

Pin		Pin	
1	1.8V	8	—
2	0V	9	0V
3	—	10	1.8V
4	0V	11	1.8V
5	4.8V	12	—
6	—	13	0V
7	1.8V	14	—

TRANSISTOR

SYMBOL	1	2	3	4	5
Q350	0V	0V	0.6V	0V	0.6V

AUDIO

TRANSISTOR

SYMBOL	1	2	3	4	5
Q301	0V	0V	0.7V(-15.2V)	0V (-6V)	0.7 (-15.5V)

TRANSISTOR

SYMBOL	(E)	(B)	(C)
Q320	0V	0V	0V (4.5V)
Q3A0	0V	0V	0V
Q3A1	0V	0V	0V

IC 300

Pin		Pin	
1	2.5V	17	0V
2	2.5V	18	3.1V
3	—	19	—
4	2.5V	20	—
5	0V	21	—
6	—	22	0V
7	0V	23	0V
8	0.1V	24	2V
9	2.5V	25	0V
10	0.2V (5V)	26	2V
11	0V (5V)	27	5V
12	2.5V	28	2V
13	4.4V (0V)	29	5V
14	2.5V	30	2V
15	0V	31	2.5V
16	0V	32	2.5V

IC 3A0

Pin		Pin		Pin		Pin	
1	2.3V	17	2.5V	33	0V	49	2.3V
2	3.3V	18	2.5V	34	5V	50	0.2V (2V)
3	2.5V	19	2.5V	35	2.5V	51	3.1V (4.3V)
4	2.5V	20	0V	36	2.5V	52	0V (5V)
5	2.5V	21	2.5V	37	2.5V	53	0V
6	0.5V	22	2.5V	38	2.5V	54	2.7V (3.2V)
7	1.8V	23	—	39	2.5V	55	3.4V (0V)
8	0V	24	2.5V	40	2.5V	56	5V
9	2.5V	25	5V	41	0V	57	3.2V
10	2.5V	26	—	42	1.8V	58	0V
11	2.5V	27	2.5V	43	0.5V	59	2V (4.1V)
12	2.5V	28	5V	44	2.5V	60	~
13	2.5V	29	0V	45	2.5V	61	0V
14	2.5V	30	0V	46	2.5V	62	0V
15	—	31	2.5V	47	0V	63	3.1V (4.4V)
16	0.6V	32	2.5V	48	3.3V	64	0.1V (2V)

CONTROL

IC 401

Pin	
1	2.5v
2	2.5v
3	2.4v
4	5v
5	2.5v
6	2.5v
7	2.6v
8	1.5v
9	2.4v
10	2.4v
11	0v
12	1.6v
13	1.5v
14	1.5v

IC 5A1

Pin	
1	5V
2	5V
3	0V

IC 5D0

Pin	
1	0V
2	—
3	—
4	0.2V
5	4.6V
6	—
7	0V
8	—
9	0V
10	—
11	5V
12	—
13	0.3V
14	—
15	6.5V
16	—

IC 5A2

Pin	
1	1.2V
2	0V
3	5.7V

IC 5A0

Pin		Pin		Pin		Pin	
1	0V	21	5V	41	2.6V (0V)	61	2.5V
2	0V	22	0V	42	5V (0V)	62	2~3V (2.4V)
3	~ (0V)	23	~	43	~	63	0.7V (0V)
4	4.2V (1V)	24	~	44	0V	64	0V
5	~	25	0~0.4V	45	0V	65	0V (5V)
6	2~3V	26	5V	46	5V	66	0~0.4V
7	~	27	0V	47	0V	67	0V
8	~	28	5V	48	4.4V	68	0V (5V)
9	2.5V (~)	29	2.1V	49	0~0.4V	69	0V
10	—	30	1.1V (1.8V)	50	—	70	0V
11	—	31	—	51	2~3V	71	0~0.7V
12	5V	32	0V	52	~	72	0V
13	5V	33	0.1V (5V)	53	5V	73	5V
14	~	34	5V (0.1V)	54	5V	74	5V
15	0V	35	4.4V (0V)	55	0V	75	5V
16	~	36	4.4V	56	0V	76	4.8V
17	5V (0V)	37	0~0.4V	57	0~0.4V	77	0~0.4V (0V)
18	0V (5V)	38	0.5V (0V)	58	2~3V	78	5V
19	5V	39	0V (5V)	59	2.5V	79	~
20	5V	40	3.5 (0V)	60	2.5V	80	~

TRANSISTOR

SYMBOL	1	2	3	4	5
Q402	~	2~3V	1~2V	0V	~

TRANSISTOR

SYMBOL	1	2	3	4	5	6
Q404	2~3V	1~2V	5V	5V	1~2V	0V

TRANSISTOR

SYMBOL	(E)	(B)	(C)
Q406	0V	5V	0V
Q407	2.5V (~)	4.3V (~)	2.5V (~)
Q5A0	5V	0V	4.6V
Q5A1	0~0.5V	0~0.5V	6.5V
Q5A2	6.5V	5.8V	5V
Q5A4	0V	0.6V	0V

POWER / MDA

IC 4B0

Pin	
1	5V
2	0V
3	2.5V
4	2.5V
5	2.5V
6	1.5V
7	1V
8	1.5V
9	1.2V
10	4.4V
11	2.3V
12	1.2V
13	1.9V
14	1.3V
15	0V
16	1.3V
17	4.1V
18	1.3V
19	2.2V
20	2.1V
21	0.7V
22	0.7V
23	3.5V
24	3.5V
25	4.4V
26	2.5V
27	2.5V
28	2.5V
29	0.2V
30	1~2V

IC 4D0

Pin	
1	0V
2	0V
3	—
4	0~3V
5	0~3V
6	0~3V
7	0V
8	2.5V
9	6.5V
10	5V
11	5V
12	—
13	—
14	0V
15	0V
16	0V
17	0V
18	1.4V
19	0V
20	4.4V
21	2V
22	0.9V
23	1.7V
24	1.7V
25	1.7V
26	1.7V
27	1.7V
28	1.7V
29	0V
30	0V

IC 902

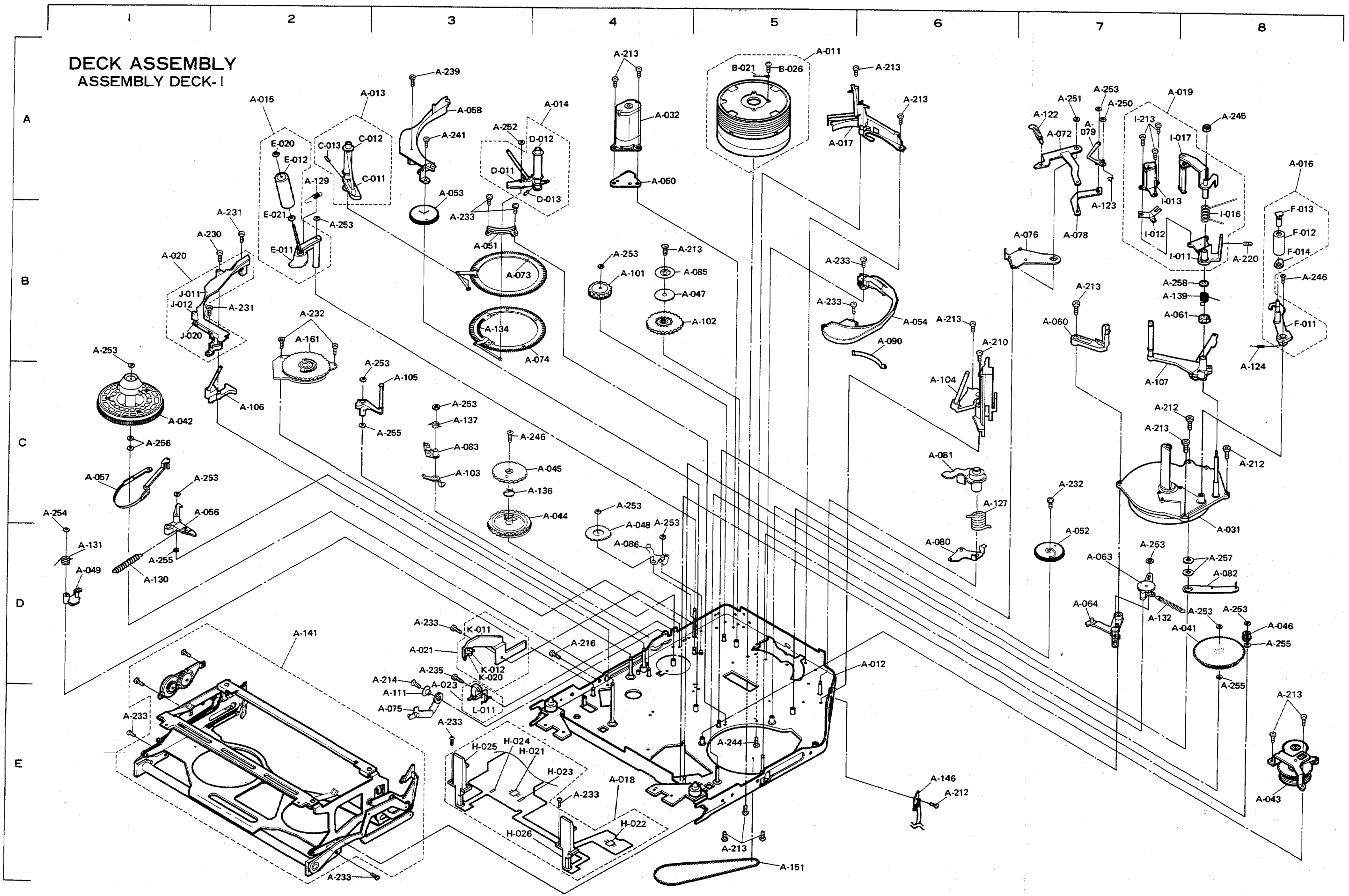
Pin	
1	2.5V
2	1.6V
3	1.2V
4	1.2V
5	1.2V
6	1.5V
7	2.5V
8	3.7V
9	0V
10	4.6V
11	1.7V
12	1.5V
13	1.2V
14	0V
15	5V
16	2.5V
17	1.4V
18	1.2V
19	4.9V
20	6.5V

TRANSISTOR

SYMBOL	(E)	(B)	(C)
Q904	6.5V	6.1V	2.6V
Q905	6.5V	6V	4.1V
Q906	6.5V	6.2V	0V

DECK ASSEMBLY

ASSEMBLY DECK-1



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D
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A-015
E-020
E-012
E-021
E-011
A-129
A-253
A-013
C-013
C-012
C-011
A-239
A-058
A-241
A-053
A-233
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A-252
D-012
D-011
D-013
A-051
A-073
A-134
A-074
A-213
A-032
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A-011
B-021
B-026
A-017
A-213
A-231
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A-020
J-011
J-012
J-020
A-231
A-232
A-161
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A-253
A-105
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A-253
A-137
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A-103
A-246
A-045
A-136
A-044
A-253
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A-085
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A-102
A-233
A-054
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A-122
A-251
A-072
A-079
A-253
A-250
A-078
A-123
A-019
I-213
I-017
I-013
I-016
I-012
I-011
A-245
A-220
A-016
F-013
F-012
F-014
A-246
F-011
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A-258
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A-210
A-104
A-212
A-213
A-212
A-031
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A-057
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A-131
A-049
A-255
A-130
A-081
A-127
A-080
A-232
A-052
A-253
A-048
A-253
A-086
A-063
A-064
A-253
A-132
A-257
A-082
A-253
A-041
A-253
A-046
A-255
A-255
A-141
A-233
K-011
A-021
K-012
K-020
A-235
A-214
A-111
A-023
A-075
L-011
A-216
A-012
A-233
H-025
H-024
H-021
H-023
A-233
A-018
H-022
H-026
A-244
A-146
A-212
A-213
A-043
A-213
A-151
A-233
A-233

＊Settelled Service Parts

ITEM	PARTS No.	＊	ADDRESS		PARTS NAME	DESCRIPTION	Qt.
A-011	948B279006	○	A-5		ASSY-DRUM	[HS-CX4E/B/A]	01
A-011	948B308003	○	A-5		ASSY-DRUM	[HS-CX1E/B/A]	01
B-021	299C028010	○	A-5		BRUSH		01
B-026	669D315020		A-5		SCREW	(M1. 7X0. 35-2)	01
A-012	948B280002		D-6		ASSY-PLATE-MAIN		01
A-013	948D029001	○	A-3		ASSY-TAPE-GUIDE-S		01
C-011	635B069010	○	A-3		TAPE-GUIDE-SP		01
C-012	522B050010	○	A-3		GUIDE-ROLLER-U2		01
C-013	669D419010		A-2		SET-SCREW	(M1. 4X0. 3)	01
A-014	948D030001	○	A-4		ASSY-TAPE-GUIDE-T		01
D-011	635B070010	○	A-3		TAPE-GUIDE-T		01
D-012	522B047010	○	A-4		GUIDE-ROLLER		01
D-013	669D419010		A-4		SET-SCREW	(M1. 4X0. 3)	01
A-015	948D031001	○	A-2		ASSY-IMP-ROLLER		01
E-011	641B443010		B-2		ARM-IMP		01
E-012	631D266010		A-2		ROLLER-IMP		01
E-020	552C009020	○	A-2		CUT-WASHER		01
E-021	552C001010	○	B-2		WASHER-THRUST		01
A-016	948D032001	○	A-8		ASSY-PINCH-ROLLER		01
F-011	591B706010		B-8		ARM-PINCH		01
F-012	522C086010	○	B-8		PINCH-ROLLER		01
F-013	641C995010		B-8		CAP-PINCH		01
F-014	621D801010		B-8		CAM-L-GR		01
A-017	948D033001	○	A-5		ASSY-STOPPER-TG		01
A-018	928C729003	○	E-4		ASSY-FPC-SENS		01
H-021	268P044020	○	E-3		PHOTO-INTERRUPTER	(Q571 ON2270. MI)	01
H-022	268P044020	○	E-4		PHOTO-INTERRUPTER	(Q572 ON2270. MI)	01
H-023	103P352020	○	E-4		CHIP METAL RESISTOR	(R571 1/8W 560Ω)	01
H-024	103P359050	○	E-4		CHIP METAL RESISTOR	(R572 1/8W 0Ω)	01
H-025	439P027010	○	E-4		SW-LEAF	(SW571)	01
A-019	928C730001	○	A-8		ASSY-A/C-HEAD		01
I-011	593C082010		B-8		PLATE-AC		01
I-012	572D451010		B-7		SPRING-PLATE-AC		01
I-013	460P103020	○	A-7		HEAD-AC	(T571)	01
I-016	572D453010		B-8		SPRING-ARM-AC		01
I-017	596D532010		A-8		LEVER-GR		01
I-213	669D420040		A-7		SCREW	(M1. 7X0. 35X3)	03
A-020	928D039002	○	B-1		ASSY-GUIDE-SLIDER		01
J-011	641B431010		B-1		GUIDE-SLIDER-L		01
J-012	641C999010		B-1		HOLDER-LED		01
J-020	264P526010	○	B-1		DIODE-LE	(D571 LN-57)	01
A-021	928D040002	○	D-3		ASSY-E-SENS		01
K-011	641B457010		D-3		HOLDER-E-SENS		01
K-012	621D770010		D-3		COVER-E-SENS		01
K-020	268P041010	○	D-3		PHOTO-TRANSISTOR	(Q573 PN147)	01
A-023	928D046001	○	A-6		ASSY-SW-C		01
L-011	439P013020	○	E-3		SW-LIMIT	(SW573)	01
A-031	288P103020	○	C-8		MOTOR-CP	(M571)	01
A-032	288P105020	○	A-4		MOTOR-LOADING	(M572)	01
A-041	522B044010	○	D-8		GEAR-REEL		01
A-042	522B045010	○	C-1		REEL-DISK		01
A-043	522B046020	○	E-8		UNIT-IDLER		01
A-044	621C021010	○	C-4		CAM-S		01
A-045	621C022010	○	C-4		CAM-S-SP		01
A-046	621D711010	○	D-8		GEAR-TU1		01

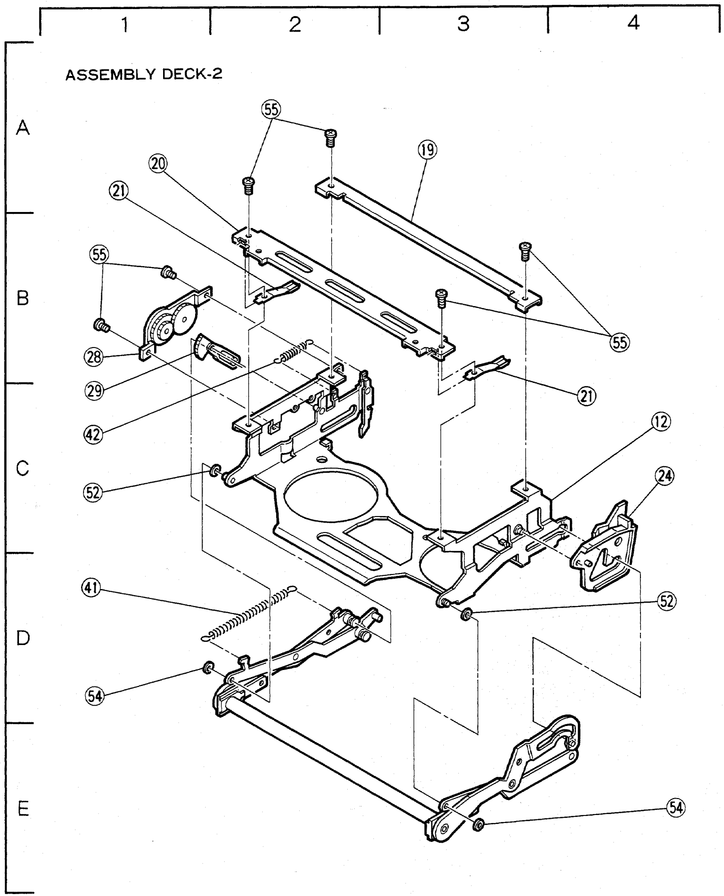
＊Settelled Service Parts

ITEM	PARTS No.	＊	ADDRESS		PARTS NAME	DESCRIPTION	Qt.
A-047	621D718010	○	B-5		GEAR-GUIDE		01
A-048	621D721010	○	C-4		GEAR-LOAD-S		01
A-049	621D727010		D-1		HOLDER-TENS		01
A-050	621D728010		A-4		HOLDER-L-MO		01
A-051	621C068010		B-3		RING-GUIDE-SP		01
A-052	641B428020	○	C-7		CAM-T		01
A-053	641B429010	○	A-3		CAM-M		01
A-054	641B432010		B-6		GUIDE-SLIDER-T		01
A-056	621C090010	○	C-2		ARM-REGULATOR		01
A-057	641B437010	○	C-1		BELT-TENS		01
A-058	641B438010		A-3		GUIDE-SLIDER-R		01
A-060	621C156010		B-7		HOLDER-CP-CAS		01
A-061	641C984010	○	B-8		CAM-GEAR-TUG		01
A-063	522C088010	○	D-8		UNIT-CLUCH-2		01
A-064	593C199010		D-7		PLATE-CLUTCH-OFF2		01
A-072	591B705010		A-7		LEVER-PINCH-B		01
A-073	591B709010	○	B-3		UNIT-RING-S		01
A-074	591B710010	○	B-4		UNIT-RING-TU		01
A-075	591B711010		E-3		ARM-EJECT		01
A-076	593C011010		B-7		LEVER-PINCH-A		01
A-078	593C012010		B-7		LINK-PINCH-A		01
A-079	593C013010		A-7		LINK-PINCH-B		01
A-080	593C216010		D-6		LEVER-ROCK-T-A2		01
A-081	593C217010		C-6		LEVER-LOCK-T-B2		01
A-082	593C016010		D-7		LEVER-CAM-T		01
A-083	593C022010		C-3		SET-ARM-S		01
A-085	596D384010	○	B-5		STOPPER-RING-S		01
A-086	593C066010		D-4		LEVER-EJECT		01
A-090	596D445010		B-6		PLATE-SLIDER-T		01
A-101	635D065010	○	B-4		GEAR-IDLER-S		01
A-102	520D161010	○	B-5		GEAR-LOAD-1		01
A-103	635D067010		C-3		LEVER-TENS-OFF		01
A-104	641B538010	○	C-6		SLANT-T		01
A-105	641B499010	○	C-3		TENS-REGULATOR		01
A-106	641B531010	○	C-2		SLANT-SP		01
A-107	635B074020	○	C-7		GUIDE-ARM-TU		01
A-111	631D290010		E-3		SLEEVE-EJECT		01
A-122	572D454010	○	A-7		SPRING-PINCH		01
A-123	572D455010		A-7		SPRING-PINCH-SUB		01
A-124	572D456010		B-8		SPRING-ARM-PINCH		01
A-127	572D541010	○	C-6		SPRING-ARM-LOCK2		01
A-129	572D461010		A-2		SPRING-IMP		01
A-130	572D462010	○	D-1		SPRING-TENS-1		01
A-131	572D463010	○	D-1		SPRING-TENS-2		01
A-132	572D541010		E-8		SPRING-RS2		01
A-134	572D465010		B-3		SPRING-F		01
A-136	572D537010		C-4		SPRING-PUSH		01
A-137	572D468010		C-3		SPRING-PUSH2		01
A-139	572D516010	○	B-8		SPRING-G		01
A-141	591B712020	○	D-2		UNIT-C-HOU-U		01
A-146	299P168010	○	E-6		SENSOR-H	(Z571)	01
A-151	521D072010	○	E-5		BELT-SYNC		01
A-161	439P026010	○	B-2		SW-MODE	(SW574)	01
A-210	669D420010		B-6		SCREW	(M1. 7X0. 35X10)	01
A-212	669D420020		C-7	C-8	SCREW	(M1. 7X0. 35X2)	03
			E-6				
A-213	669D420040		A-4	A-6	SCREW	(M1. 7X0. 35X3)	13
			B-4	B-6			
			B-7	C-7			
			E-5	E-8			
A-214	669D420050		D-3		SCREW	(M1. 7X0. 35X4)	01
A-216	669D420070		D-4		SCREW	(M1. 7X0. 35X6)	01
A-220	669D405010	○	B-8		SCREW	(M1. 7X0. 35X3)	01
A-230	669D421010		B-2		SCREW	(M1. 7X0. 35X10)	01
A-231	669D421030		B-2		SCREW	(M1. 7X0. 35X2. 5)	02
A-232	669D421020		B-2	C-7	SCREW	(M1. 7X0. 35X2)	03

＊Settelled Service Parts

ITEM	PARTS No.	＊	ADDRESS		PARTS NAME	DESCRIPTION	Qt.
A-233	669D421040		B-3	B-5	SCREW	(M1. 7X0. 35X3)	09
			D-3	E-1			
			E-2	E-3			
			E-4				
A-235	669D421060		D-3		SCREW	(M1. 7X0. 35X5)	01
A-239	669D421090		A-3		SCREW	(M1. 7X0. 35X9)	01
A-241	669D344020		A-3		SCREW-FLANGE	(M1. 7X0. 35-2)	01
A-244	669D423060		E-5		SCREW	(M1. 4X0. 3 L=3. 5)	01
A-245	674D093010		A-8		NUT-S	(M2X0. 4)	01
A-246	669D443010		B-8	C-3	SCREW	(M1. 7X0. 35X3)	02
A-250	552C016010		A-7		WASHER		01
A-251	552C007010	○	A-7		CUT-WASHER		01
A-252	552C009010	○	A-3		CUT-WASHER		01
A-253	552C009020	○	A-7	B-1	CUT-WASHER		12
			B-2	B-3			
			B-4	C-2			
			C-3	C-4			
			D-8				
A-254	552C009040	○	C-1		CUT-WASHER		01
A-255	552C001010	○	C-3		WASHER-THRUST		04
			D-1	D-8			
A-256	552C006010	○	C-1		WASHER-THRUST		02
A-257	552C014010		D-7		WASHER-THRUST		02
A-258	683D120010		B-8		WASHER-AC		01

ASSEMBLY DECK-2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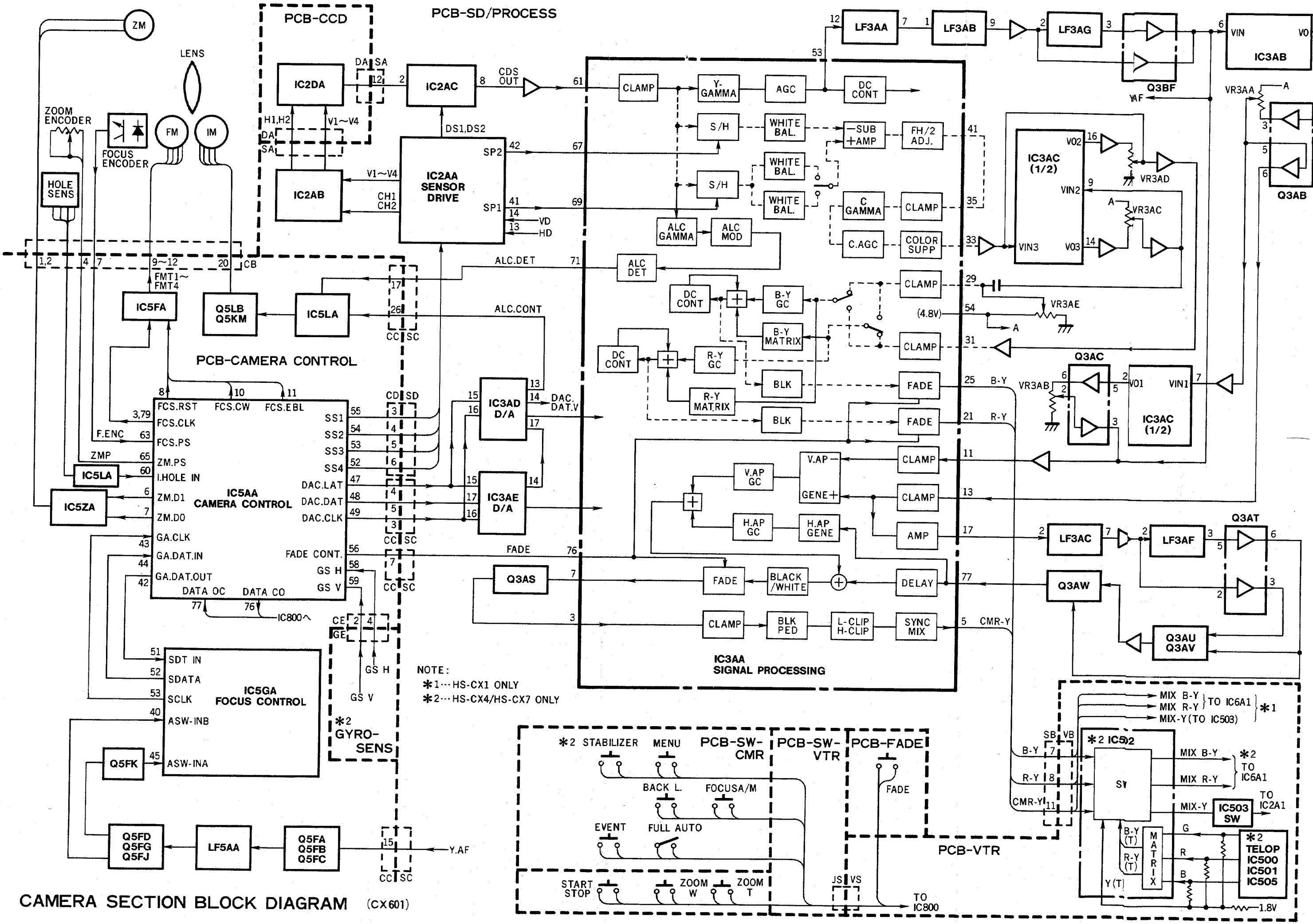
* Settelled Service Parts

ITEM	PARTS No.	*	ADDRESS		PARTS NAME	DESCRIPTION	Qt.
12	591B716020		C-4		BOTTOM-HOU-U		01
19	596D396010		A-3		PLATE-TOP-D		01
20	596D397010		A-1		PLATE-TOP-C		01
21	596D398010		A-1	C-4	PLATE-HOLD		02
28	621C049010		B-1		UNIT-DANPER		01
28	621C049010	○	B-1		UNIT-DANPER		01
29	621D792010	○	C-1		LEVER-DANPER		01
41	572D473010	○	D-1		SPRING-LIFT		01
42	572D472010	○	C-1		SPRING-HOOK		01
52	----------		C-1	D-4	WASHER THRUST		02
54	----------		D-1	E-4	CUT-WASHER		02
55	----------		A-1 B-4	A-2	SCREW	M1.7	06


PCB-CCD
PCB-SD/PROCESS
ZM
LENS
ZOOM ENCODER
FOCUS ENCODER
FM
IM
HOLE SENS
IC2DA
IC2AB
IC2AC
CDS OUT
IC2AA SENSOR DRIVE
DS1,DS2
SP2
SP1
VD
HD
V1~V4
H1,H2
CH1 CH2
DA SA
CB
FMT1~FMT4
IC5FA
Q5LB Q5KM
IC5LA
ALC.DET
ALC.CONT
CC SC
PCB-CAMERA CONTROL
IC5AA CAMERA CONTROL
FCS.RST
FCS.CW
FCS.EBL
FCS.CLK
FCS.PS
ZM.PS
I.HOLE IN
ZM.D1
ZM.D0
GA.CLK
GA.DAT.IN
GA.DAT.OUT
DATA OC
DATA CO
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SS2
SS3
SS4
DAC.LAT
DAC.DAT
DAC.CLK
FADE CONT.
GS H
GS V
F.ENC
ZMP
IC5LA
IC5ZA
IC800
CD SD
IC3AD D/A
IC3AE D/A
DAC. DAT.V
FADE
Q3AS
CE GE
*2 GYRO-SENS
IC5GA FOCUS CONTROL
SDT IN
SDATA
SCLK
ASW-INB
ASW-INA
Q5FK
Q5FD Q5FG Q5FJ
LF5AA
Q5FA Q5FB Q5FC
Y.AF
NOTE:
*1…HS-CX1 ONLY
*2…HS-CX4/HS-CX7 ONLY
IC3AA SIGNAL PROCESSING
CLAMP
Y-GAMMA
AGC
DC CONT
S/H
WHITE BAL.
-SUB +AMP
FH/2 ADJ.
C GAMMA
C.AGC
COLOR SUPP
ALC GAMMA
ALC MOD
ALC DET
B-Y GC
B-Y MATRIX
R-Y GC
R-Y MATRIX
BLK
FADE
V.AP GC
V.AP GENE
H.AP GC
H.AP GENE
AMP
BLACK /WHITE
DELAY
BLK PED
L-CLIP H-CLIP
SYNC MIX
LF3AA
LF3AB
LF3AG
Q3BF
IC3AB
VIN
YAF
VR3AA
Q3AB
IC3AC (1/2)
VO2
VIN2
VIN3
VO3
VR3AD
VR3AC
VR3AE
(4.8V)
Q3AC
VR3AB
VO1
VIN1
B-Y
R-Y
CMR-Y
LF3AC
LF3AF
Q3AT
Q3AW
Q3AU Q3AV
MIX B-Y
MIX R-Y
TO IC6A1
MIX-Y (TO IC503)
*1
SB VB
*2 IC502
SW
MIX-Y
IC503 SW
TO IC2A1
*2 TO IC6A1
G
R
B
B-Y (T)
R-Y (T)
Y (T)
MATRIX
*2 TELOP IC500 IC501 IC505
1.8V
PCB-VTR
*2 STABILIZER
MENU
PCB-SW-CMR
PCB-SW-VTR
PCB-FADE
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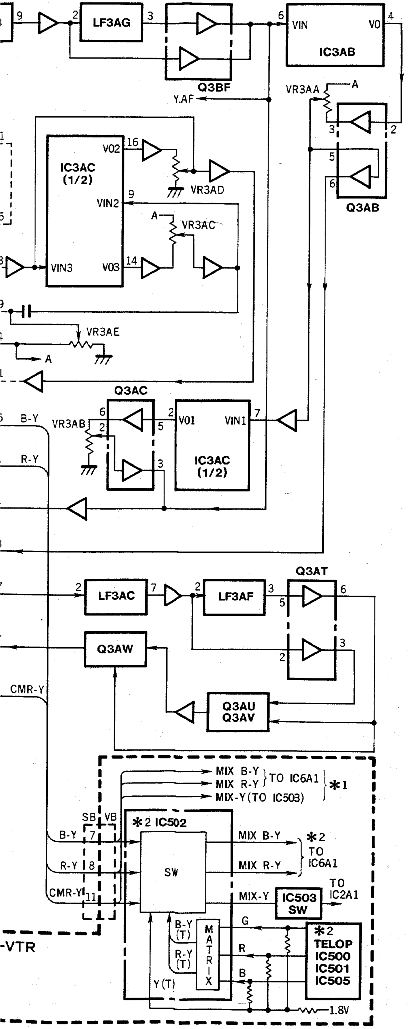
FOCUS A/M
EVENT
FULL AUTO
START STOP
ZOOM W
ZOOM T
JS VS
TO IC800

CAMERA SECTION BLOCK DIAGRAM (CX601)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VIN3
V03
VR3AD
VR3AC
A
VR3AE
A
Q3AC
VR3AB
B-Y
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Q3AW
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MIX B-Y
MIX R-Y
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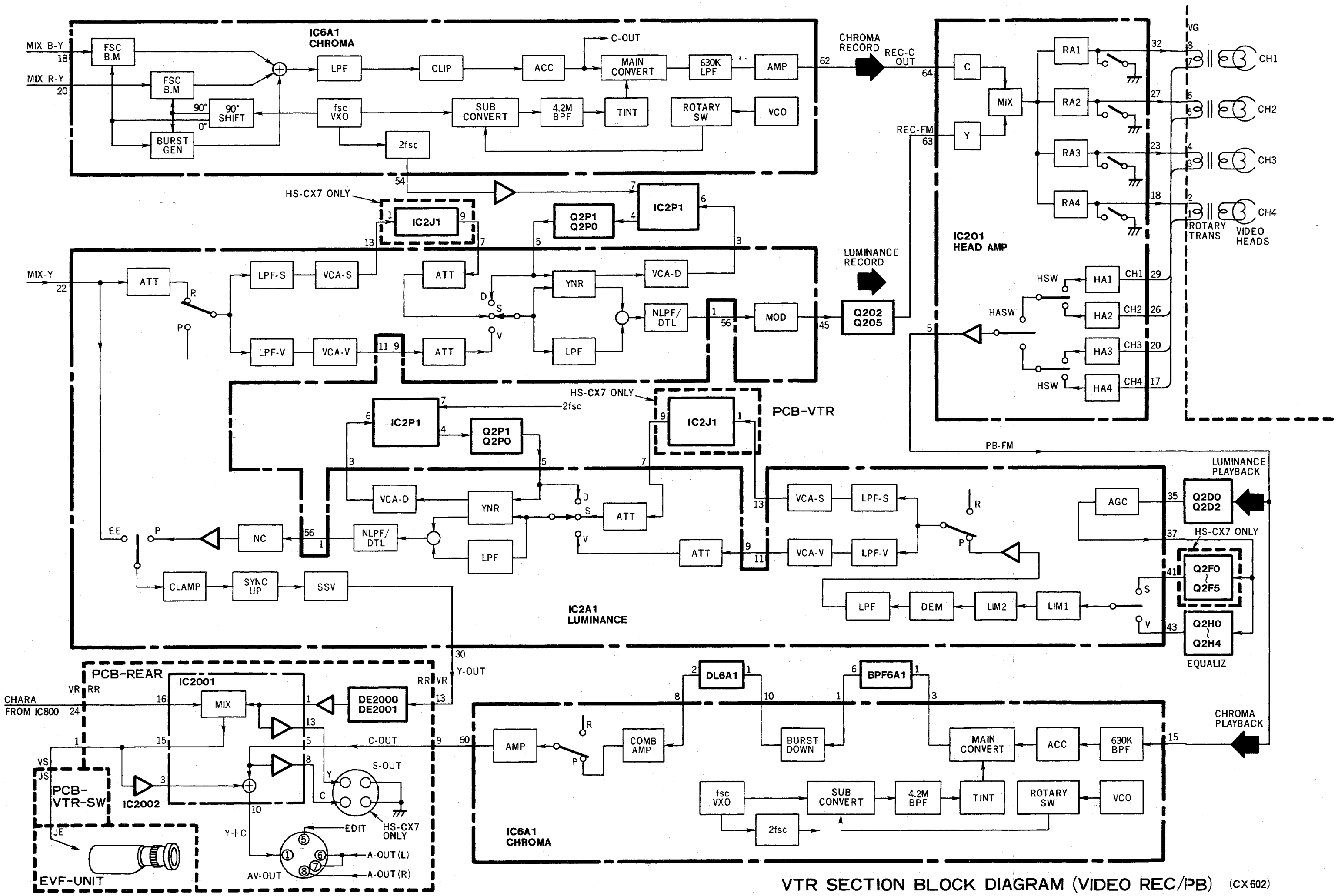
MIX-Y (TO IC503)
SB
VB
*2 IC502
SW
B-Y
R-Y
CMR-Y
MIX B-Y
MIX R-Y
*2
TO
IC6A1
TO
IC2A1
MIX-Y
IC503
SW
B-Y
(T)
R-Y
(T)
Y (T)
MATRIX
G
R
B
*2
TELOP
IC500
IC501
IC505
1.8V
-VTR

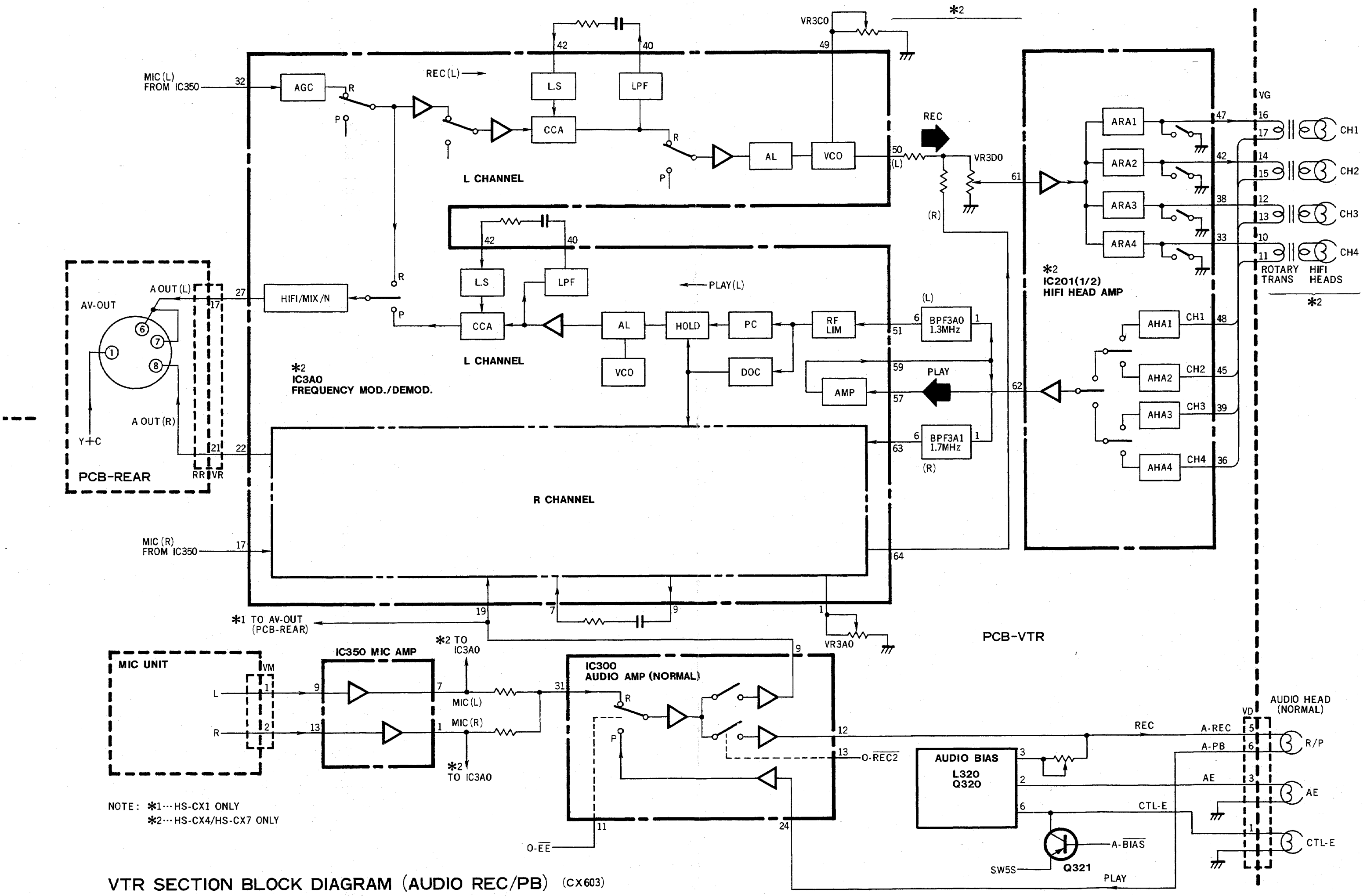
CAMERA CONTROL μ COMPUTER FUNCTION (IC 5AA)

PIN NO.	NAME	I/O	FUNCTION
2	LTR-BLK	O	Letter Box blanking pulse
3	FCS.CLK	O	Focus Lens drive pulse
4	$\overline{\text{P.DET}}$	O	Special effect switch signal in Ski mode
5	ZM.SPD	O	Zoom speed control signal, high speed at "H" .
6	ZM.D1	O	Zoom Lens is driven in the direction of "TELE" .
7	ZM.D0	O	Zoom Lens is driven in the direction of "WIDE" .
8	FCS.RST	O	fixed at "H" .
10	FCS.CW	O	Focus Lens is driven in the direction of "∞" at "H" .
11	FCS.EBL	O	Focus motor power is saved at "H" .
12	ALC.CNTL	O	Iris control signal
13	27/$\overline{\text{36}}$	I	jumper lead input to select Picture Element number of CCD.
14	$\overline{\text{RST.FL}}$	O	"L" output for about 400 μsec synchronized with VD.
15	DL.PWR	O	Signal to rise 9V power supply
16	PAL/$\overline{\text{NTSC}}$	I	jumper lead input to select PAL or NTSC.
17	S.STRB	I	Strobe signal input from operational microcomputer.
18	HD	I	H sync signal
19	VD	I	V sync signal
25	CNVSS	—	GND
26	$\overline{\text{RST}}$	I	"L" input when μ computor is reset.
28	XIN	I	System Clock input
32	VSS	—	GND
33	LED.ON	O	"L" output to light LED for center detection
35	GA.HLSB	O	Stabilizer horizontal address data
36	SEL.1MFIL	O	Signal to select IMHz or 600kHz (1MHZ at "H")
37	FCS.AREA	O	Signal to select Focus Area (fixed at "L")
38	HF.ENABL	O	Signal to select Stabilizer ON or OFF.
39	GA.STRB	O	Strobe signal output to IC 5GA
40	GA.READY	I	Ready signal input from IC 5GA
42	GA.DAT.OUT	O	Stabilizer address data output to IC 5GA
43	GA.CLK	O	Clock signal output to IC 5GA
44	GA.DAT.IN	I	Focus Evaluation data input from IC 5GA
45	E2.DAT.IN	I	Serial data input from EEPROM
46	E2.LAT	O	Chip select signal to EEPROM
47	DAC.LAT	O	Chip select signal to D/A converter
48	DAC.DAT	O	Data to D/A converter and EEPROM
49	DAC.CLK	O	Serial clock to D/A converter and EEPROM
50	$\overline{\text{WBLK.DIS}}$	O	Special effect switch signal in Party mode

PIN NO.	NAME	I/O	FUNCTION
52	SS4	O	Shutter speed control signal
53	SS3		
54	SS2		
55	SS1		
56	B.COMP	I	White balance control input
57	R.COMP		
58	GS-H	I	Signal from Angular velocity sensor
59	GS-V		
60	I.HOLE.IN	I	Signal from Iris sensor
61	APLX	I	Signal from Y signal integration circuit
62	APL		
63	FCS.PS	I	Signal from Focus encoder.
64	ZM.PSX4	I	Signal from Zoom encoder
65	ZM.PS		
66	FADE.CNTL	O	Fader control signal output
67	FLK.CNTL	O	Flicker compensation signal output
68	DAVREF	I	Reference voltage input for D/A converter
69	ADVREF	I	Reference voltage input for A/D converter
70	AVSS	—	GND for D/A converter and A/D converter
71	AVCC	I	Power source input for A/D converter
72	VCC	I	Power source input for μ computer
73	VSS	—	GND
75	C.CLK	I	Serial data and clock between this μ computer and operation μ computer.
76	DATA.CO	O	
77	DATA.OC	I	
79	FCS.CLK	O	Focus Lens drive pulse

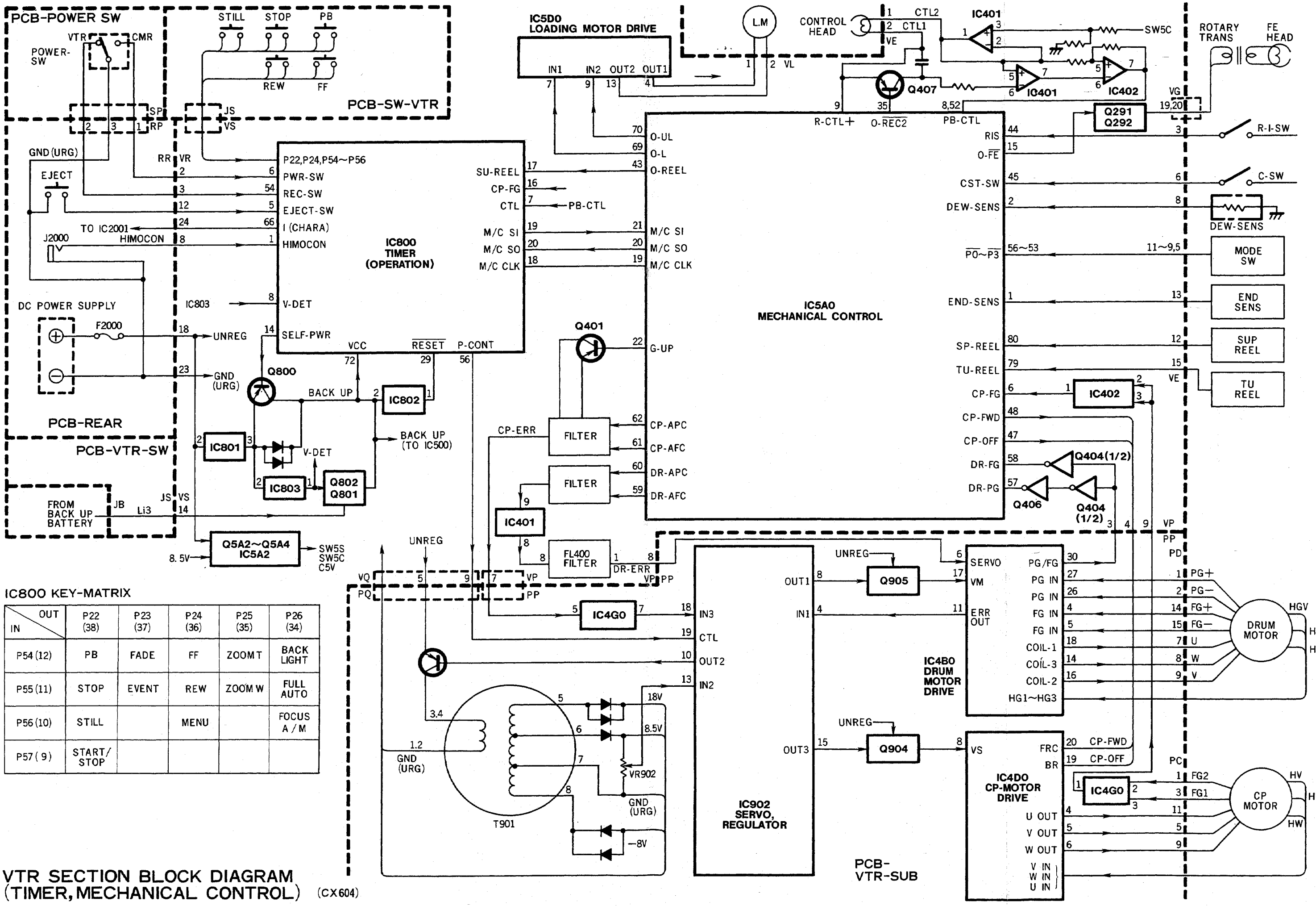

IC6A1
CHROMA
MIX B-Y
18
MIX R-Y
20
FSC B.M
FSC B.M
90°
0°
90° SHIFT
BURST GEN
LPF
CLIP
ACC
C-OUT
MAIN CONVERT
630K LPF
AMP
62
fsc VXO
SUB CONVERT
4.2M BPF
TINT
ROTARY SW
VCO
2fsc
54
CHROMA RECORD
REC-C OUT
64
REC-FM
63
C
Y
MIX
RA1
RA2
RA3
RA4
32
27
23
18
VG
8
7
6
5
4
3
2
1
CH1
CH2
CH3
CH4
ROTARY TRANS
VIDEO HEADS
IC201
HEAD AMP
HSW
HASW
HSW
HA1
HA2
HA3
HA4
CH1
CH2
CH3
CH4
29
26
20
17
5
HS-CX7 ONLY
IC2J1
1
9
13
7
IC2P1
7
6
4
3
Q2P1 Q2P0
5
MIX-Y
22
ATT
R
P
LPF-S
VCA-S
LPF-V
VCA-V
11
9
ATT
ATT
D
S
V
YNR
VCA-D
NLPF/ DTL
LPF
1
56
MOD
45
LUMINANCE RECORD
Q202 Q205
IC2P1
7
6
4
3
2fsc
Q2P1 Q2P0
5
HS-CX7 ONLY
IC2J1
9
1
7
PCB-VTR
PB-FM
VCA-D
YNR
D
S
V
ATT
EE
P
NC
56
1
NLPF/ DTL
LPF
ATT
CLAMP
SYNC UP
SSV
13
VCA-S
LPF-S
9
11
VCA-V
LPF-V
R
P
AGC
35
Q2D0 Q2D2
LUMINANCE PLAYBACK
37
HS-CX7 ONLY
41
Q2F0 ~ Q2F5
S
V
43
Q2H0 ~ Q2H4
EQUALIZ
LPF
DEM
LIM2
LIM1
IC2A1
LUMINANCE
30
Y-OUT
PCB-REAR
IC2001
VR
RR
CHARA FROM IC800
16
24
MIX
1
15
RR
VR
13
DE2000 DE2001
1
13
5
C-OUT
9
60
8
S-OUT
Y
C
HS-CX7 ONLY
3
IC2002
10
Y+C
EDIT
⑤
①
⑥
⑦
⑧
A-OUT (L)
A-OUT (R)
AV-OUT
VS
JS
PCB-VTR-SW
JE
EVF-UNIT
2
DL6A1
1
8
10
6
BPF6A1
1
1
3
AMP
R
P
COMB AMP
BURST DOWN
MAIN CONVERT
ACC
630K BPF
15
CHROMA PLAYBACK
fsc VXO
2fsc
SUB CONVERT
4.2M BPF
TINT
ROTARY SW
VCO
IC6A1
CHROMA

VTR SECTION BLOCK DIAGRAM (VIDEO REC/PB) (CX602)


*2
VR3C0
42
40
49
MIC (L) FROM IC350
32
AGC
R
P
REC (L)
L.S
LPF
CCA
R
P
AL
VCO
L CHANNEL
50 (L)
REC
VR3D0
(R)
61
VG
ARA1
ARA2
ARA3
ARA4
47
42
38
33
16
17
14
15
12
13
10
11
CH1
CH2
CH3
CH4
ROTARY TRANS
HIFI HEADS
*2
*2 IC201(1/2) HIFI HEAD AMP
AV-OUT
A OUT (L)
27
17
HIFI/MIX/N
R
P
42
40
L.S
LPF
CCA
AL
HOLD
PC
RF LIM
PLAY (L)
(L)
6
BPF3A0 1.3MHz
1
51
VCO
DOC
L CHANNEL
59
PLAY
AMP
57
62
*2 IC3A0 FREQUENCY MOD./DEMOD.
AHA1
AHA2
AHA3
AHA4
CH1
CH2
CH3
CH4
48
45
39
36
A OUT (R)
Y+C
21
22
6
BPF3A1 1.7MHz
1
63
(R)
PCB-REAR
RR
VR
R CHANNEL
MIC (R) FROM IC350
17
64
19
7
9
1
*1 TO AV-OUT (PCB-REAR)
VR3A0
PCB-VTR
9
MIC UNIT
VM
L
R
1
2
IC350 MIC AMP
9
13
7
1
*2 TO IC3A0
MIC (L)
MIC (R)
*2 TO IC3A0
31
IC300 AUDIO AMP (NORMAL)
R
P
12
13
O-REC2
11
24
O-EE
AUDIO BIAS L320 Q320
3
2
6
REC
A-REC
A-PB
AE
CTL-E
VD
AUDIO HEAD (NORMAL)
5
6
3
1
R/P
AE
CTL-E
A-BIAS
SW5S
Q321
PLAY

NOTE: *1…HS-CX1 ONLY
*2…HS-CX4/HS-CX7 ONLY

VTR SECTION BLOCK DIAGRAM (AUDIO REC/PB) (CX603)

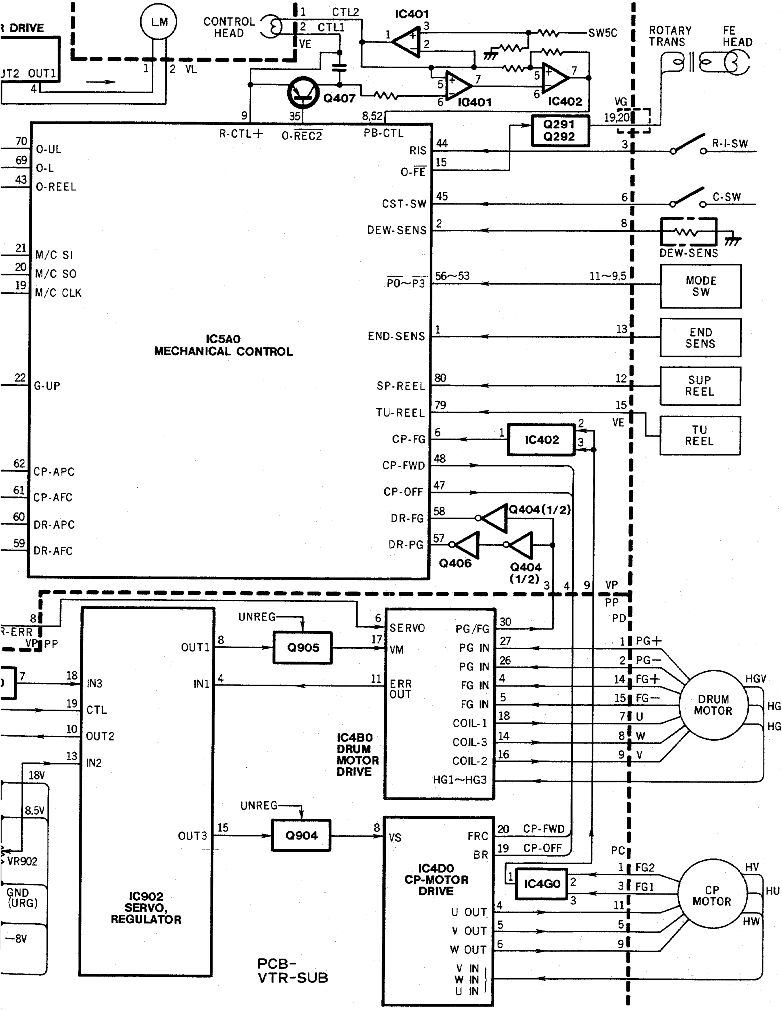

PCB-POWER SW
VTR
CMR
POWER-SW
STILL
STOP
PB
REW
FF
PCB-SW-VTR
SP
RP
JS
VS
GND (URG)
RR
VR
EJECT
TO IC2001
HIMOCON
J2000
DC POWER SUPPLY
F2000
UNREG
GND (URG)
PCB-REAR
PCB-VTR-SW
FROM BACK UP BATTERY
JB
Li3
IC803
P22,P24,P54~P56
PWR-SW
REC-SW
EJECT-SW
I (CHARA)
HIMOCON
V-DET
SELF-PWR
VCC
RESET
P-CONT
SU-REEL
CP-FG
CTL
PB-CTL
M/C SI
M/C SO
M/C CLK
IC800 TIMER (OPERATION)
Q800
BACK UP
IC802
IC801
V-DET
IC803
Q802 Q801
BACK UP (TO IC500)
Q5A2~Q5A4 IC5A2
8. 5V
SW5S
SW5C
C5V
IC5D0 LOADING MOTOR DRIVE
IN1
IN2
OUT2
OUT1
L.M
VL
CONTROL HEAD
CTL2
CTL1
VE
IC401
SW5C
Q407
IC402
R-CTL+
O-REC2
PB-CTL
ROTARY TRANS
FE HEAD
VG
Q291 Q292
R-I-SW
C-SW
DEW-SENS
MODE SW
END SENS
SUP REEL
TU REEL
O-UL
O-L
O-REEL
M/C SI
M/C SO
M/C CLK
G-UP
CP-APC
CP-AFC
DR-APC
DR-AFC
IC5A0 MECHANICAL CONTROL
RIS
O-FE
CST-SW
DEW-SENS
P0~P3
END-SENS
SP-REEL
TU-REEL
CP-FG
CP-FWD
CP-OFF
DR-FG
DR-PG
Q401
CP-ERR
FILTER
FILTER
IC401
FL400 FILTER
DR-ERR
IC402
Q404(1/2)
Q406
Q404 (1/2)
VP
PP
PD
UNREG
VQ
PQ
IC4G0
IN3
CTL
OUT2
IN2
OUT1
IN1
OUT3
IC902 SERVO, REGULATOR
Q905
Q904
SERVO
VM
ERR OUT
PG/FG
PG IN
PG IN
FG IN
FG IN
COIL-1
COIL-3
COIL-2
HG1~HG3
IC4B0 DRUM MOTOR DRIVE
PG+
PG−
FG+
FG−
U
W
V
DRUM MOTOR
HGV
HGL
HGU
18V
8.5V
VR902
GND (URG)
−8V
T901
3.4
1.2
GND (URG)
VS
FRC
BR
CP-FWD
CP-OFF
IC4D0 CP-MOTOR DRIVE
U OUT
V OUT
W OUT
V IN
W IN
U IN
IC4G0
PC
FG2
FG1
CP MOTOR
HV
HU
HW
PCB-VTR-SUB

IC800 KEY-MATRIX

OUT / IN	P22 (38)	P23 (37)	P24 (36)	P25 (35)	P26 (34)
P54 (12)	PB	FADE	FF	ZOOM T	BACK LIGHT
P55 (11)	STOP	EVENT	REW	ZOOM W	FULL AUTO
P56 (10)	STILL		MENU		FOCUS A / M
P57 (9)	START/ STOP				

VTR SECTION BLOCK DIAGRAM (TIMER, MECHANICAL CONTROL)

(CX604)


DRIVE
LM
CONTROL HEAD
CTL2
CTL1
VE
IC401
SW5C
ROTARY TRANS
FE HEAD
OUT2 OUT1
VL
Q407
IC401
IC402
VG
R-CTL+
O-REC2
PB-CTL
Q291
Q292
O-UL
O-L
O-REEL
RIS
O-FE
R-I-SW
CST-SW
C-SW
DEW-SENS
DEW-SENS
M/C SI
M/C SO
M/C CLK
P0~P3
MODE SW
IC5A0
MECHANICAL CONTROL
END-SENS
END SENS
G-UP
SP-REEL
SUP REEL
TU-REEL
TU REEL
CP-FG
IC402
CP-FWD
CP-OFF
CP-APC
CP-AFC
DR-APC
DR-AFC
DR-FG
DR-PG
Q404(1/2)
Q406
Q404 (1/2)
VP
PP
PD
R-ERR
UNREG
OUT1
Q905
SERVO
VM
PG/FG
PG IN
PG IN
FG IN
FG IN
COIL-1
COIL-3
COIL-2
HG1~HG3
PG+
PG−
FG+
FG−
U
W
V
DRUM MOTOR
HGV
HGL
HGU
IN3
CTL
OUT2
IN2
IN1
ERR OUT
IC4B0
DRUM MOTOR DRIVE
18V
8.5V
VR902
GND (URG)
−8V
UNREG
OUT3
Q904
VS
FRC
BR
CP-FWD
CP-OFF
IC4D0
CP-MOTOR DRIVE
IC4G0
PC
FG2
FG1
CP MOTOR
HV
HU
HW
U OUT
V OUT
W OUT
V IN
W IN
U IN
IC902
SERVO, REGULATOR
PCB-VTR-SUB

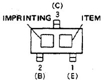
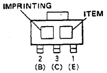
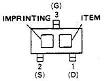
M/C μ COMPUTER FUNCTION (IC 5AO)

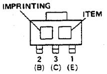
PIN NO.	NAME	I/O	FUNCTION
1.	END-SENS	I	"H" input when tape end is detected.
2	DEW-SENS	I	"H" input when dew falls on the deck.
3	A-ENV	I	Playback Audio level signal
4	V-ENV	I	Playback Video level signal
5	A-FF25/ A-FF30	O	Audio Head switch signal
6	CP-FG	I	Capstan FG signal
7	V-FF25/ V-FF30	O	Video Head switch signal
8	CTL	I	Control signal from CTL Head
9	RECCTL+	O	Control signal to CTL Head
14	A-FF25/ A-FF30	O	Audio Head switch signal
15	O-$\overline{\text{FE}}$	O	"L" output when FE Head is ON.
16	A-FF25 IN A-FF30 IN	I	Audio Head switch signal input
17	PB-PROT	I	PB-5V input
18	REC-PROT	I	REC-5V input
19	M/C CLK	I	Serial data and clock between M/C and OPE μ computer.
20	DATA SO	O	
21	DATA SI	I	
22	G-UP	O	Capstan motor control signal
23	V-FF12.5/ V-FF15	O	Video Head switch signal
24	A-FF12.5/ A-FF15	O	Audio Head switch signal
25	V-OVL	O	Control signal to Head Amp
26	$\overline{\text{VSYNC}}$	I	V-Sync input
27	CNVSS	—	GND
28	$\overline{\text{RESET}}$	I	"L" input when μ computer is reset.
29	X-IN	—	oscillator
30	X-OUT		
32	VSS	—	GND
33	O-$\overline{\text{PB}}$	O	"L" output in Playback mode
34	O-$\overline{\text{REC}}$	O	"L" output in Recording mode
35	O-$\overline{\text{REC2}}$	O	REC control signal ("L" during Recording)
36	D-ON	O	"H" output when drum motor is ON.
37	A-OVL	O	Control signal to Head Amp
38	O-SP	O	"H" output in SP mode
39	O-$\overline{\text{PB2}}$	O	"H" output in Playback mode
40	O-$\overline{\text{EE1}}$	O	"L" output in EE mode (Recording or Stop mode)
41	O-$\overline{\text{EE2}}$	O	
42	HF-$\overline{\text{REC2}}$	O	"L" output during HiFi recording
43	O-REEL	O	Reel pulse output
44	RIS	I	Recording Inhibit signal ("L" input when recording is possible.)
45	CST-SW	I	Casset Housing is open at "H"

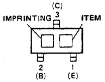
PIN NO.	NAME	I/O	FUNCTION
46	O-$\overline{\text{EDIT}}$	O	"L" output in Editting mode
47	CP-OFF	O	"L" output when Capstan motor is ON.
48	CP-FWD	O	"H" output to drive Capstan motor forward direction
49	DR-PG IN	I	Drum PG signal input
51	DR-FG	I	Drum FG signal input
52	PB-CTL	I	Control signal from CTL Head
53	$\overline{\text{P3}}$	I	Deck mode switch input
54	$\overline{\text{P2}}$		
55	$\overline{\text{P1}}$		
56	$\overline{\text{P0}}$		
57	DR-PG	I	Drum PG signal input
58	DR-FG	I	Drum FG signal input
59	DR-AFC	O	Drum servo speed error output
60	DR-APC	O	Drum servo phase error output
61	CP-AFC	O	Capstan servo speed error output
62	CP-APC	O	Capstan servo phase error output
63	O-$\overline{\text{N}}$	O	"H" output in special playback mode
64	O-LP	O	"H" output in LP mode
65	O-EE	O	"H" output in EE mode
66	ES-LED	O	pulse output to light ES-LED
67	O-MUTE	O	"H" output in special playback mode
68	O-REC	O	"H" output in Recording mode
69	O-L	O	Loading motor drive output
70	O-UL		
71	PG-MM	I	PG-MM control signal
72	AVSS	—	GND
73	VCC	I	Power source input
74	AVCC		
75	VREF		
76	$\overline{\text{SS-VSYNC}}$	O	Quasi-sync signal for special playback
77	2/3PG OUT	O	Quasi-Drum PG signal output
78	TR-ADJ	O	TR-MM signal output
79	TU-REEL	I	Reel pulse input
80	SP-REEL	I	

CHIP PARTS SHAPES

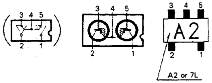
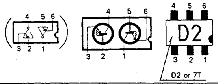
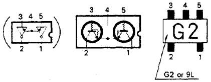
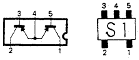
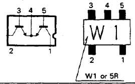
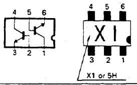
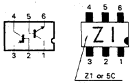
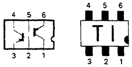
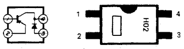
(4-1)

DESCRIPTION	IMPRINTING	PARTS No.	SHAPES
CHIP TRANSISTOR			
2SA1235-F,G	MF, MG	260P802090	 (C) IMPRINTING 3 ITEM 2 1 (B) (E)
2SA1576-R/2SB1218A-R 2SB1218A-Q	FR, BR BQ	260P859020 260P859070	
2SA1576-R	FR	260P859050	
2SA1577-Q/2SB1219A-R	HQ, DR	260P861020	
2SA1577-Q 2SA1577-R	HQ HR	260P861050 260P861060	
2SA1610-Y34	Y34	260P870010	
2SC4081-Q/2SD1819A-Q	BQ, ZQ	260P855010	
2SC4081-R/2SD1819A-R 2SC4081-S/2SD1819A-S	BR, ZS BS, ZS	260P855020 260P855030	
2SC4098-P/2SC3936-B	AP, KB	260P854020	
2SC4098-Q/2SC3936-C	AQ, KC	260P854030	
2SC4176-B34	B34	260P869020	
2SC4176-B35	B35	260P869010	
2SD1819A-Q	ZQ	260P855070	
2SD1949-Q/2SD1820A-R	YQ, XR	260P867020	
2SD1949-R	YR	260P867060	
DTA144EU/UN5113	16, 6C	260P856010	
DTC114EK	24	260P808010	
DTC144EU/UN5213	26, 8C	260P857010	
DTC144EU	26	260P857020	
DTA114EU/UN5111	14, 6A	260P858010	
2SB798-DK	DK	260P482010	 IMPRINTING ITEM 2 3 1 (B) (C) (E)
2SB1114-ZL	ZL	260P847010	
2SC3736-OK	OK	260P866010	
2SD999-CK	CK	260P865010	
2SK209GR	XG	260P864010	 (G) IMPRINTING 3 ITEM 2 (S) (D)

2SC2873-Y	MY	260P868010	 IMPRINTING ITEM 2 3 1 (B) (C) (E)
2SA1213-Y	NY	260P701010	

DTA124EU	15	260P871020	 (C) IMPRINTING 3 ITEM 2 1 (B) (E)
DTC124EU	25	260P872020	
2SC4618-P/2SC4655-B DTA144EE/UN9113 DTC144EE/UN9213	AP, KB 16, 6C 26, 8C	260P877020 260P879010 260P880010	

(4-2)

DESCRIPTION	IMPRINTING	PARTS No.	SHAPES
CHIP TRANSISTOR			
FMA2/XN1113	A2 or 7L	260P853010	 3 4 5 2 1 3 4 5 2 1 3 4 5 A2 2 1 A2 or 7L
IMD2/XN4312	D2 or 7T	260P851010	 4 5 6 3 2 1 4 5 6 3 2 1 4 5 6 D2 3 2 1 D2 or 7T
FMG2/XN1213	G2 or 9L	260P852010	 3 4 5 2 1 3 4 5 2 1 3 4 5 G2 2 1 G2 or 9L
FMS1	S1	260P843010	 3 4 5 2 1 3 4 5 S1 2 1
FMW1/XN1501	W1 or 5R	260P844020	 3 4 5 2 1 3 4 5 W1 2 1 W1 or 5R
IMX1/XN4501	X1 or 5H	260P845020	 4 5 6 3 2 1 4 5 6 X1 3 2 1 X1 or 5H
IMZ1/XN4601	Z1 or 5C	260P849020	 4 5 6 3 2 1 4 5 6 Z1 3 2 1 Z1 or 5C
IMT1	T1	260P863010	 4 5 6 3 2 1 4 5 6 T1 3 2 1
SAH02-VIL	H02	260P873010	

DESCRIPTION	IMPRINTING	PARTS No.	S
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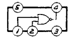
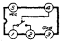
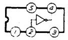
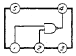
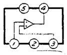
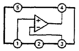
SC14S01F	C3	263P223010	
SC14S66F	C9	263P217010	 5 4 Vcc Gnd 1 2 3
SC7SU04F	E6	263P220010	
SC7S00F	E1	263P230010	
S-81250HG-RD-T1	RD	272P360010	IMPRIN ① V_{SS} ② V_{IN} ③ V_{OUT}
NJM2406F	1	272P364010	IMPRINTI 
PST529C	T529C	272P357010	① IN ② GND ③ OUT
S-80725AL-AN-T1 S-8054ALB-LM-T1 S-8054HNM	AN LM CQ	263P375010 272P362010 263P440010	① OUT ② V_{DD} ③ V_{SS} IMI
S-81215AG-RK-T1 /RH5RA16AA	RK or 6A	272P359010	IM ① GND ② V_{IN} ③ V_{OUT}
NJM2107F	2	272P592010	IMPRINTIN 
M5236ML M5237ML	36 37	272P294010 272P674010	IMPRIN ① V_{IN} ② GND ③ V_{REF}
S-81350HG-KD-T1	KD	263P373010	IM ① GND ② V_{IN} ③ V_{OUT}

(4-2)

IMPRINTING	PARTS No.	SHAPES
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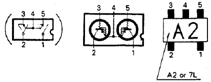
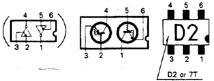
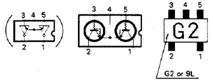
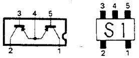
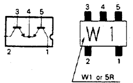
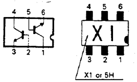
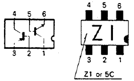
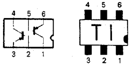
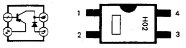
A2 or 7L	260P853010	
D2 or 7T	260P851010	
G2 or 9L	260P852010	
S1	260P843010	
W1 or 5R	260P844020	
X1 or 5H	260P845020	
Z1 or 5C	260P849020	
T1	260P863010	
H02	260P873010	

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DESCRIPTION	IMPRINTING	PARTS No.	SHAPES
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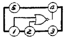
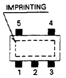
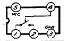
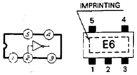
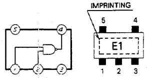
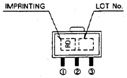
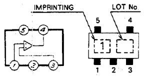
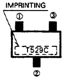
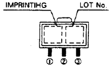
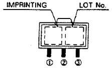
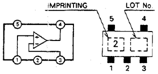
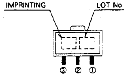
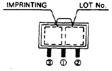
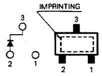
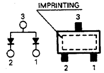
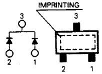
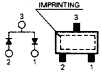
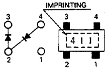
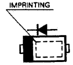
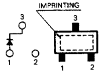
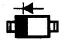
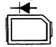
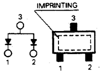
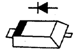
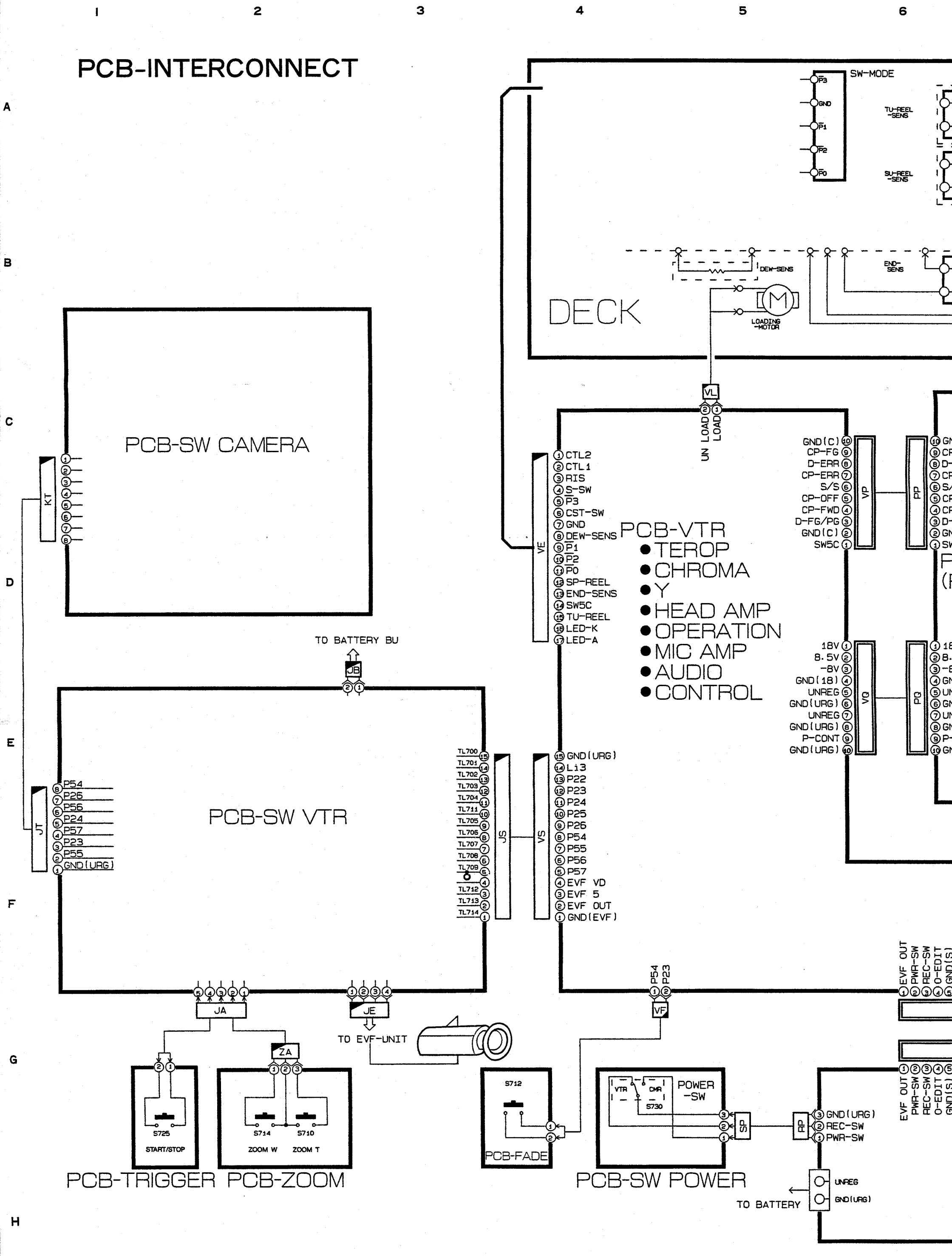
SC14S01F	C3	263P223010	 
SC14S66F	C9	263P217010	
SC7SU04F	E6	263P220010	
SC7S00F	E1	263P230010	
S-81250HG-RD-T1	RD	272P360010	① Vss ② VIN ③ VOUT 
NJM2406F	1	272P364010	
PST529C	T529C	272P357010	① IN ② GND ③ OUT 
S-80725AL-AN-T1 S-8054ALB-LM-T1 S-8054HNM	AN LM CQ	263P375010 272P362010 263P440010	① OUT ② VDD ③ VSS 
S-81215AG-RK-T1 /RH5RA16AA	RK or 6A	272P359010	① GND ② VIN ③ VOUT 
NJM2107F	2	272P592010	
M5236ML M5237ML	36 37	272P294010 272P674010	① VIN ② GND ③ VREF 
S-81350HG-KD-T1	KD	263P373010	① GND ② VIN ③ VOUT 

(4-4)

DESCRIPTION	IMPRINTING	PARTS No.	SHAPES
CHIP DIODE			
RD2.4MB RD5.1MB1 RD6.8MB1 RD7.5MB2 RD10MB RD11MB2	24 511 681 752 100 1102	264P815010 264P815060 264P816040 264P816050 264P816080 264P816090	
DAP202U/MA142WA MA142WA MA132WA	P or MO MO MO	264P814010 264P814030 264P841030	
DAN202U/MA142WK	N or MU	264P828010	
DA204U DA221/MA133	K K, MP	264P830020 264P843010	
ND411G-2	411	264P833010	
U1GWJ44 SPB-54V SFPB-64V	GW B54 B64	264P603010 264P831010 264P832010	
MA141K MA720	MH M2W	264P837010 264P850010	
ISV205 ISV223 MA341 RD7.5UMB2		264P838010 264P845010 264P834010 264P844050	
LN1351C		264P839010	
MA741WA	M2P	264P847010	
MA110 MA728 MA732	1A 2A 2C	264P848010 264P849010 264P846010	

PCB-INTERCONNECT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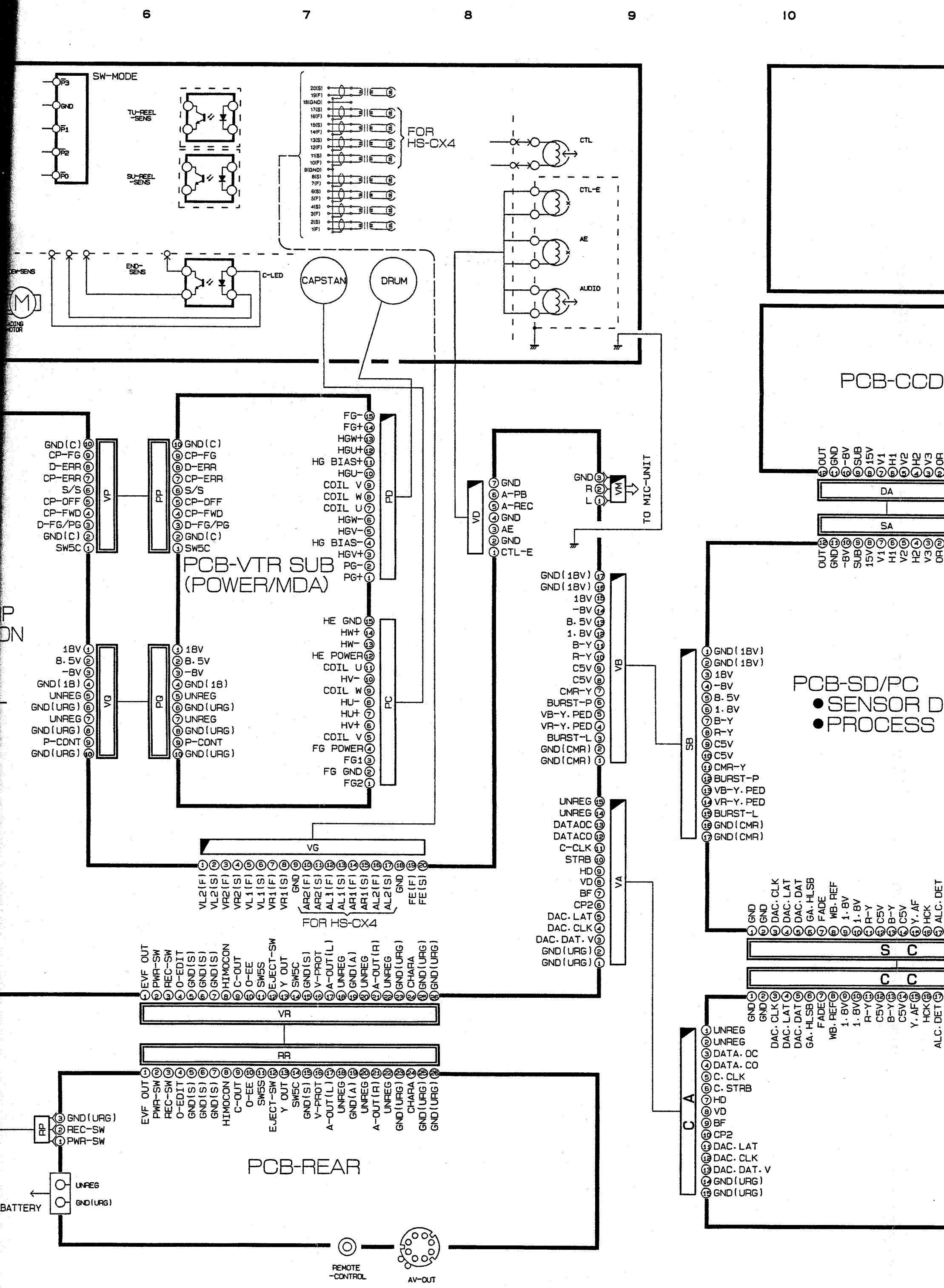
2
3
4
5
6
A
B
C
D
E
F
G
H
DECK
SW-MODE
P3
GND
P1
P2
P0
TU-REEL -SENS
SU-REEL -SENS
DEW-SENS
END-SENS
LOADING -MOTOR
M
VL
UN LOAD
LOAD
PCB-SW CAMERA
KT
PCB-VTR
TEROP
CHROMA
Y
HEAD AMP
OPERATION
MIC AMP
AUDIO
CONTROL
VE
① CTL2
② CTL1
③ RIS
④ S-SW
⑤ P3
⑥ CST-SW
⑦ GND
⑧ DEW-SENS
⑨ P1
⑩ P2
⑪ P0
⑫ SP-REEL
⑬ END-SENS
⑭ SW5C
⑮ TU-REEL
⑯ LED-K
⑰ LED-A
GND(C) ⑩
CP-FG ⑨
D-ERR ⑧
CP-ERR ⑦
S/S ⑥
CP-OFF ⑤
CP-FWD ④
D-FG/PG ③
GND(C) ②
SW5C ①
VP
PP
18V ①
8.5V ②
-8V ③
GND(18) ④
UNREG ⑤
GND(URG) ⑥
UNREG ⑦
GND(URG) ⑧
P-CONT ⑨
GND(URG) ⑩
VQ
PQ
TO BATTERY BU
JB
PCB-SW VTR
JT
⑧ P54
⑦ P26
⑥ P56
⑤ P24
④ P57
③ P23
② P55
① GND(URG)
TL700
TL701
TL702
TL703
TL704
TL711
TL705
TL706
TL707
TL708
TL709
TL712
TL713
TL714
JS
VS
⑮ GND(URG)
⑭ Li3
⑬ P22
⑫ P23
⑪ P24
⑩ P25
⑨ P26
⑧ P54
⑦ P55
⑥ P56
⑤ P57
④ EVF VD
③ EVF 5
② EVF OUT
① GND(EVF)
JA
JE
TO EVF-UNIT
ZA
P54
P23
VF
S725
START/STOP
S714
S710
ZOOM W
ZOOM T
PCB-TRIGGER
PCB-ZOOM
S712
PCB-FADE
VTR
CMR
S730
POWER -SW
SP
RP
③ GND(URG)
② REC-SW
① PWR-SW
PCB-SW POWER
UNREG
GND(URG)
TO BATTERY
EVF OUT
PWR-SW
REC-SW
O-EDIT
GND(S)


6
7
8
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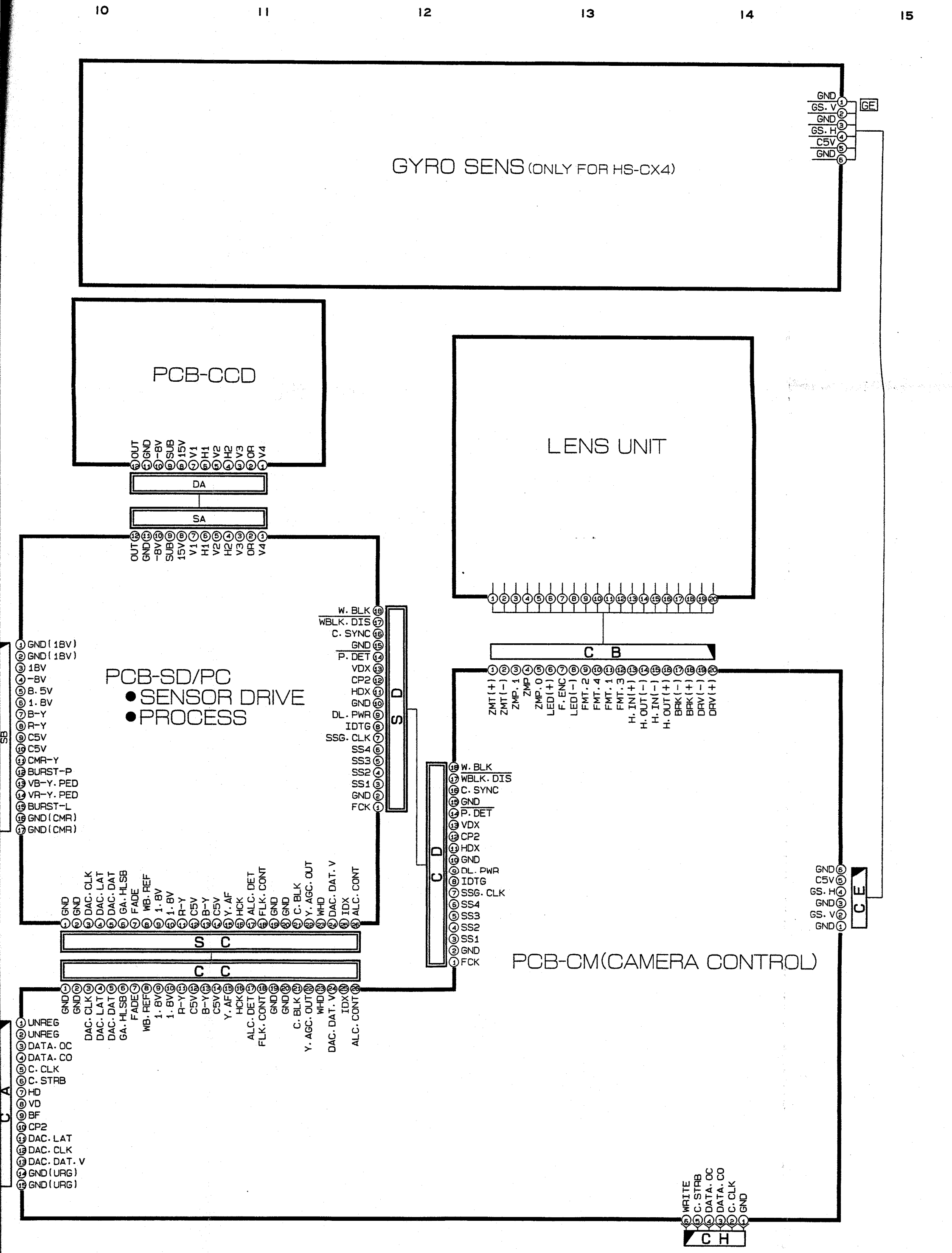
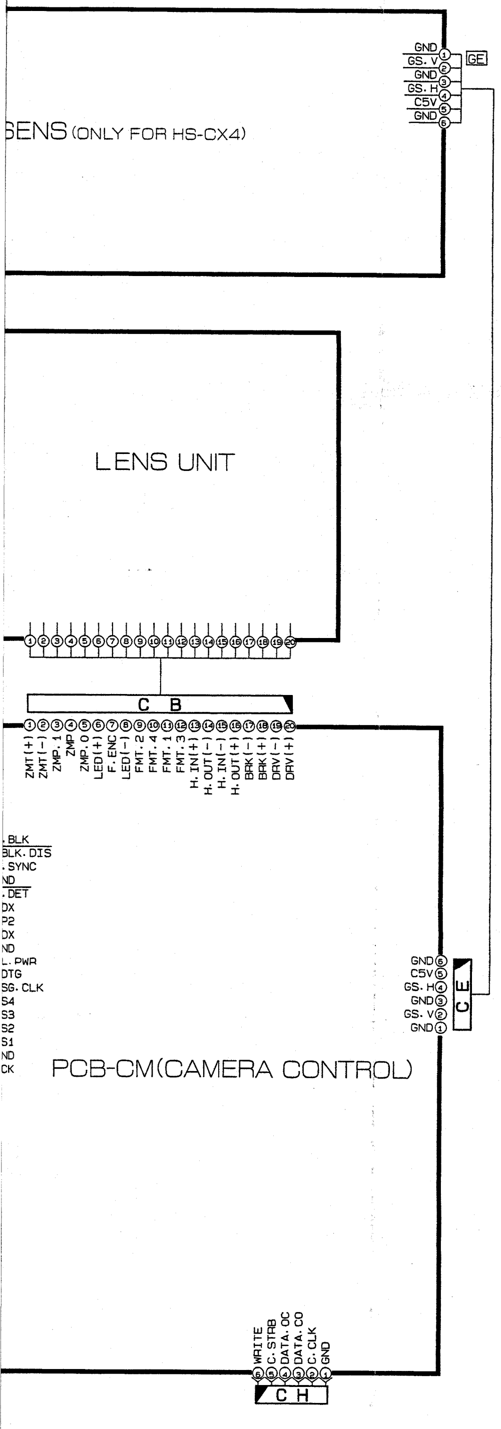
10
SW-MODE
P3
GND
P1
P2
P0
TU-REEL -SENS
SU-REEL -SENS
END-SENS
C-LED
LOADING MOTOR
FOR HS-CX4
CAPSTAN
DRUM
CTL
CTL-E
AE
AUDIO
PCB-CCD
PCB-VTR SUB (POWER/MDA)
VP
PP
PD
PQ
VQ
PC
VD
VM
VB
VA
VG
SB
SA
DA
SC
CC
CA
VR
RR
RP
GND(C) ⑩
CP-FG ⑨
D-ERR ⑧
CP-ERR ⑦
S/S ⑥
CP-OFF ⑤
CP-FWD ④
D-FG/PG ③
GND(C) ②
SW5C ①
FG- ⑮
FG+ ⑭
HGW+ ⑬
HGU+ ⑫
HG BIAS+ ⑪
HGU- ⑩
COIL V ⑨
COIL W ⑧
COIL U ⑦
HGW- ⑥
HGV- ⑤
HG BIAS- ④
HGV+ ③
PG- ②
PG+ ①
⑦ GND
⑥ A-PB
⑤ A-REC
④ GND
③ AE
② GND
① CTL-E
GND ③
R ②
L ①
TO MIC-UNIT
18V ①
8.5V ②
-8V ③
GND(18) ④
UNREG ⑤
GND(URG) ⑥
UNREG ⑦
GND(URG) ⑧
P-CONT ⑨
GND(URG) ⑩
HE GND ⑮
HW+ ⑭
HW- ⑬
HE POWER ⑫
COIL U ⑪
HV- ⑩
COIL W ⑨
HU- ⑧
HU+ ⑦
HV+ ⑥
COIL V ⑤
FG POWER ④
FG1 ③
FG GND ②
FG2 ①
GND(18V) ⑰
GND(18V) ⑯
18V ⑮
-8V ⑭
8.5V ⑬
1.8V ⑫
B-Y ⑪
R-Y ⑩
C5V ⑨
C5V ⑧
CMR-Y ⑦
BURST-P ⑥
VB-Y.PED ⑤
VR-Y.PED ④
BURST-L ③
GND(CMR) ②
GND(CMR) ①
① GND(18V)
② GND(18V)
③ 18V
④ -8V
⑤ 8.5V
⑥ 1.8V
⑦ B-Y
⑧ R-Y
⑨ C5V
⑩ C5V
⑪ CMR-Y
⑫ BURST-P
⑬ VB-Y.PED
⑭ VR-Y.PED
⑮ BURST-L
⑯ GND(CMR)
⑰ GND(CMR)
PCB-SD/PC
● SENSOR D
● PROCESS
⑬ OUT ⑫ GND ⑪ -8V ⑩ SUB ⑨ 15V ⑧ V1 ⑦ H1 ⑥ V2 ⑤ H2 ④ V3 ③ OR
UNREG ⑮
UNREG ⑭
DATAOC ⑬
DATACO ⑫
C-CLK ⑪
STRB ⑩
HD ⑨
VD ⑧
BF ⑦
CP2 ⑥
DAC.LAT ⑤
DAC.CLK ④
DAC.DAT.V ③
GND(URG) ②
GND(URG) ①
① VL2(F) ② VL2(S) ③ VR2(F) ④ VR2(S) ⑤ VL1(F) ⑥ VL1(S) ⑦ VR1(F) ⑧ VR1(S) ⑨ GND ⑩ AR2(F) ⑪ AR2(S) ⑫ AL1(F) ⑬ AL1(S) ⑭ AR1(F) ⑮ AR1(S) ⑯ AL2(F) ⑰ AL2(S) ⑱ GND ⑲ FE(F) ⑳ FE(S)
FOR HS-CX4
① GND ② GND ③ DAC.CLK ④ DAC.LAT ⑤ DAC.DAT ⑥ GA.HLSB ⑦ FADE ⑧ WB.REF ⑨ 1.8V ⑩ 1.8V ⑪ R-Y ⑫ C5V ⑬ B-Y ⑭ C5V ⑮ Y.AF ⑯ HCK ⑰ ALC.DET
① EVF OUT ② PWR-SW ③ REC-SW ④ O-EDIT ⑤ GND(S) ⑥ GND(S) ⑦ GND(S) ⑧ HIMOCON ⑨ C-OUT ⑩ O-EE ⑪ SW5S ⑫ EJECT-SW ⑬ Y OUT ⑭ SW5C ⑮ GND(S) ⑯ V-PROT ⑰ A-OUT(L) ⑱ UNREG ⑲ GND(A) ⑳ UNREG ㉑ A-OUT(R) ㉒ UNREG ㉓ GND(URG) ㉔ CHARA ㉕ GND(URG) ㉖ GND(URG)
① UNREG
② UNREG
③ DATA.OC
④ DATA.CO
⑤ C.CLK
⑥ C.STRB
⑦ HD
⑧ VD
⑨ BF
⑩ CP2
⑪ DAC.LAT
⑫ DAC.CLK
⑬ DAC.DAT.V
⑭ GND(URG)
⑮ GND(URG)
③ GND(URG)
② REC-SW
① PWR-SW
PCB-REAR
UNREG
GND(URG)
BATTERY
REMOTE -CONTROL
AV-OUT


10
11
12
13
14
15
GYRO SENS (ONLY FOR HS-CX4)
GE
GND ①
GS. V ②
GND ③
GS. H ④
C5V ⑤
GND ⑥
PCB-CCD
OUT ⑫
GND ⑪
-8V ⑩
SUB ⑨
15V ⑧
V1 ⑦
H1 ⑥
V2 ⑤
H2 ④
V3 ③
OR ②
V4 ①
DA
SA
LENS UNIT
C B
① ZMT(+)
② ZMT(-)
③ ZMP. 1
④ ZMP
⑤ ZMP. 0
⑥ LED(+)
⑦ F. ENC
⑧ LED(-)
⑨ FMT. 2
⑩ FMT. 4
⑪ FMT. 1
⑫ FMT. 3
⑬ H. IN(+)
⑭ H. OUT(-)
⑮ H. IN(-)
⑯ H. OUT(+)
⑰ BRK(-)
⑱ BRK(+)
⑲ DRV(-)
⑳ DRV(+)
PCB-SD/PC
● SENSOR DRIVE
● PROCESS
SB
① GND(18V)
② GND(18V)
③ 18V
④ -8V
⑤ 8. 5V
⑥ 1. 8V
⑦ B-Y
⑧ R-Y
⑨ C5V
⑩ C5V
⑪ CMR-Y
⑫ BURST-P
⑬ VB-Y. PED
⑭ VR-Y. PED
⑮ BURST-L
⑯ GND(CMR)
⑰ GND(CMR)
S D
W. BLK ⑱
WBLK. DIS ⑰
C. SYNC ⑯
GND ⑮
P. DET ⑭
VDX ⑬
CP2 ⑫
HDX ⑪
GND ⑩
DL. PWR ⑨
IDTG ⑧
SSG. CLK ⑦
SS4 ⑥
SS3 ⑤
SS2 ④
SS1 ③
GND ②
FCK ①
C D
S C
C C
① GND
② GND
③ DAC. CLK
④ DAC. LAT
⑤ DAC. DAT
⑥ GA. HLSB
⑦ FADE
⑧ WB. REF
⑨ 1. 8V
⑩ 1. 8V
⑪ R-Y
⑫ C5V
⑬ B-Y
⑭ C5V
⑮ Y. AF
⑯ HCK
⑰ ALC. DET
⑱ FLK. CONT
⑲ GND
⑳ GND
㉑ C. BLK
㉒ Y. AGC. OUT
㉓ WHD
㉔ DAC. DAT. V
㉕ IDX
㉖ ALC. CONT
C A
① UNREG
② UNREG
③ DATA. OC
④ DATA. CO
⑤ C. CLK
⑥ C. STRB
⑦ HD
⑧ VD
⑨ BF
⑩ CP2
⑪ DAC. LAT
⑫ DAC. CLK
⑬ DAC. DAT. V
⑭ GND(URG)
⑮ GND(URG)
PCB-CM(CAMERA CONTROL)
C E
GND ⑥
C5V ⑤
GS. H ④
GND ③
GS. V ②
GND ①
C H
⑥ WRITE
⑤ C. STRB
④ DATA. OC
③ DATA. CO
② C. CLK
① GND


GND ①
GS. V ②
GND ③
GS. H ④
C5V ⑤
GND ⑥
GE
SENS (ONLY FOR HS-CX4)
LENS UNIT
C B
ZMT(+)
ZMT(−)
ZMP.1
ZMP
ZMP.0
LED(+)
F.ENC
LED(−)
FMT.2
FMT.4
FMT.1
FMT.3
H.IN(+)
H.OUT(−)
H.IN(−)
H.OUT(+)
BRK(−)
BRK(+)
DRV(−)
DRV(+)
.BLK
BLK.DIS
.SYNC
ND
.DET
DX
P2
DX
ND
L.PWR
DTG
SG.CLK
S4
S3
S2
S1
ND
CK
GND⑥
C5V⑤
GS.H④
GND③
GS.V②
GND①
C E
PCB-CM(CAMERA CONTROL)
WRITE
C.STRB
DATA.OC
DATA.CO
C.CLK
GND
C H

SCHEMATIC DIAGRAM

NOTE 1:

- DC voltages were measured from points indicated to the circuit ground with a Digital voltmeter.
- Waveforms of camera section were taken with the four color chart.
- Waveforms of VTR section were taken with standard color bar signal.
- The unit of resistance "ohm" entirely omitted.
  Accordingly, K=1000 ohms.
  M=1000K ohms.
- Resistors, not specifically designated, are R-M-chip resistors.
- The tolerance of resistor value, not specifically designated, is: ±5%.
- The unit of capacitance, not specifically designated, is:
  a) µF, for numbers less than 1
  b) PF, for numbers more than 1
- Capacitors, not specifically designated are Ceramic chip capacitors except electrolytic capacitors.
- The marks of capacitors are as follows:
  TAN : Tantalum capacitor
  ⯒ : Electrolytic capacitor
- The tolerance of capacitor value, not specifically designated is: ±10%
  and J = ±5% K = ±10% M = ±20% $P = {}^{+100\%}_{-\ 0\%}$
  C = ±0.25PF D = ±0.5PF F = ± 1PF $Z = {}^{+80\%}_{-20\%}$ N = ±30%
- Ceramic capacitors with the marks RH, UJ, SL, etc. are temperature compensating types.

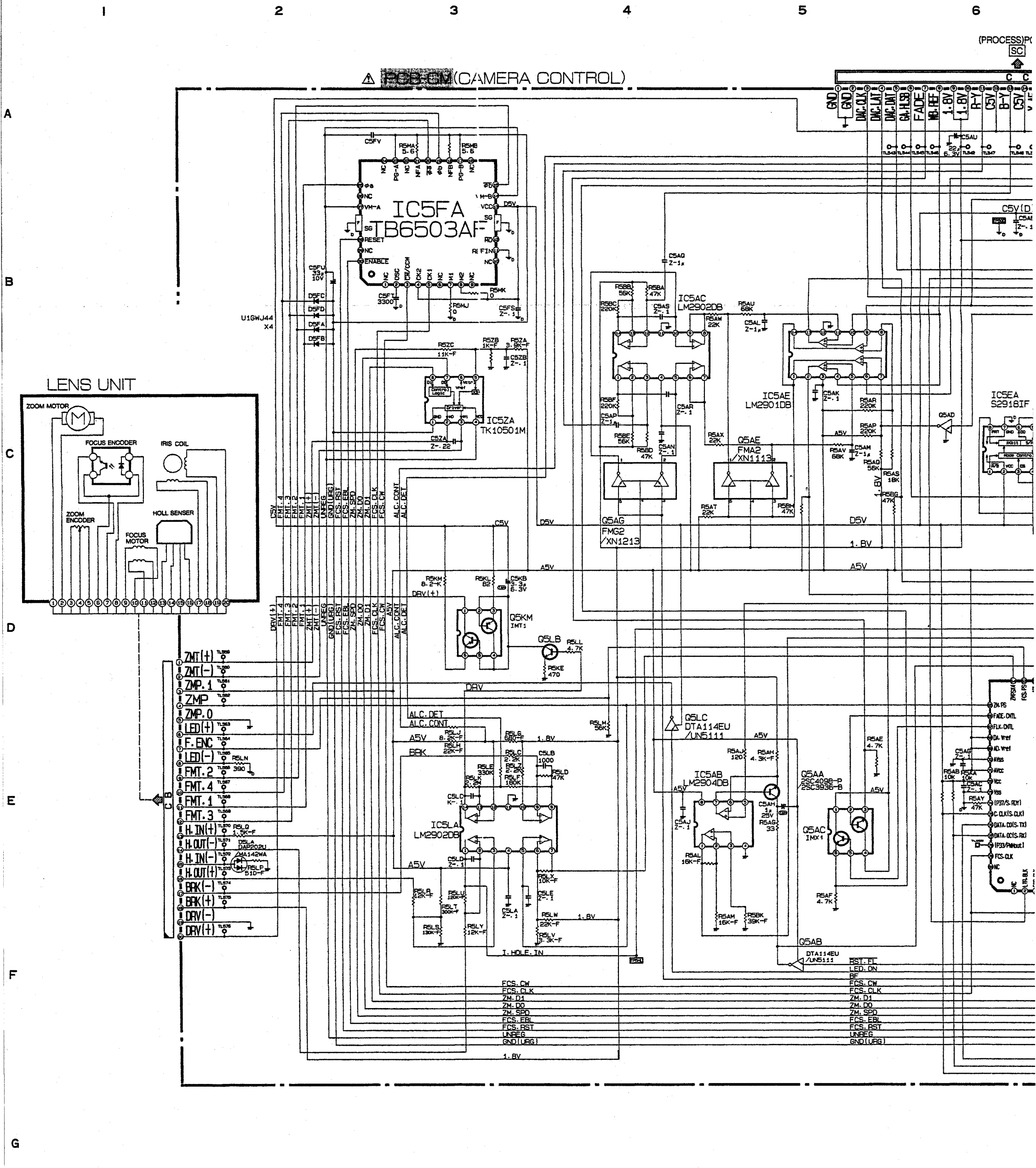
SPECIFIC SYMBOL	
Zener Diode	Crystal unit
LE Diode	
Photo Diode	Ceramic filter

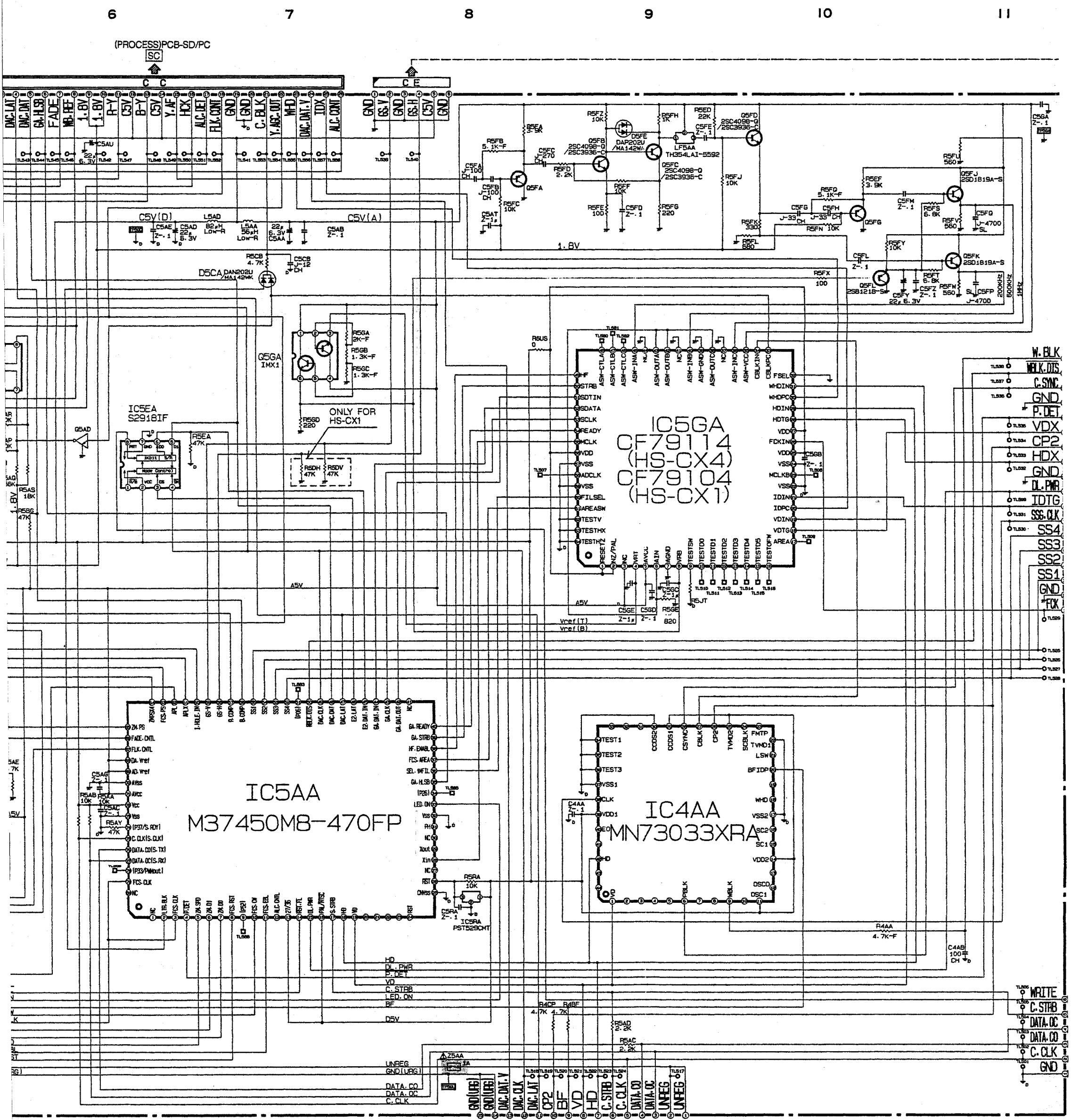
This is a basic schematic diagram. Some sets may be subject to modification according to engineering improvement.

⚠
SERVICING PRECAUTION

SYMBOLS INDICATE COMPONENTS HAVING SPECIAL CHARACTERISTICS IMPORTANT TO SAFETY AND PERFORMANCE. THEREFOR REPLACEMENT OF ANY SAFETY PARTS SHOULD BE IDENTICAL IN VALUE AND CHARACTERISTICS.

DON'T DEGRADE THE SAFETY OF THE VCR THROUGH IMPROPER SERVICING.

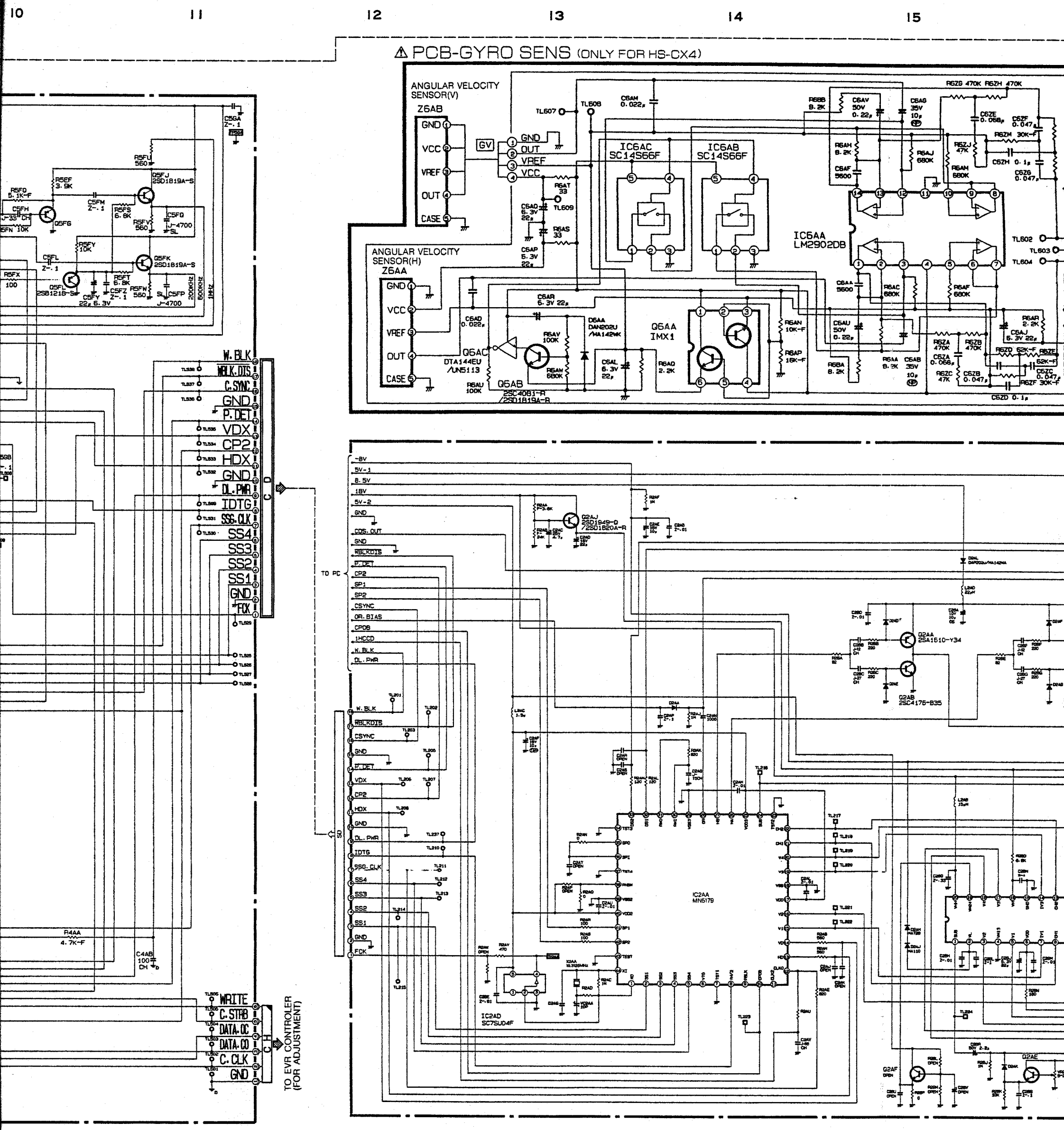

1
2
3
4
5
6
A
B
C
D
E
F
G
(PROCESS)P
SC
PCB CM (CAMERA CONTROL)
GND
GND
DAC.CLK
DAC.LAT
DAC.DAT
GA.HLSB
FADE
WB.REF
1.8V
1.8V
R-Y
C5V
B-Y
C5V
C5AU
IC5FA
TB6503AF
C5FV
R5MA 5.6
R5MB 5.6
RESET
ENABLE
D5V
C5FU 33μ 10V
C5FT 3300
R5MJ
R5MK 0
C5FS Z-.1
D5FC
D5FD
D5FA
D5FB
U1GWJ44 X4
R5ZC 11K-F
R5ZB 1K-F
R5ZA 3.9K-F
C5ZB Z-.1
C5ZA Z-.22
IC5ZA
TK10501M
LENS UNIT
ZOOM MOTOR
FOCUS ENCODER
IRIS COIL
ZOOM ENCODER
HOLL SENSER
FOCUS MOTOR
C5AQ Z-1μ
R5BB 56K
R5BA 47K
R5BC 220K
C5AS Z-.1
IC5AC
LM2902DB
R5AW 22K
R5AU 68K
C5AL Z-1μ
IC5AE
LM2901DB
R5BF 220K
C5AP Z-1μ
R5BE 56K
R5BD 47K
C5AR Z-.1
C5AN Z-.1
R5AX 22K
Q5AE
FMA2
/XN1113
Q5AG
FMG2
/XN1213
R5AT 22K
R5BH 47K
C5AK Z-.1
R5AR 220K
R5AP 220K
C5AM Z-1μ
R5AV 68K
R5AQ 56K
R5AS 18K
R5BG 47K
Q5AD
IC5EA
S2918IF
C5V(D
C5V
D5V
A5V
1.8V
C5V
FMT.4
FMT.3
FMT.2
FMT.1
ZMT(+)
ZMT(-)
UNREG
GND(URG)
FCS.RST
FCS.EBL
ZM.SPD
ZM.D0
ZM.D1
FCS.CLK
FCS.CW
ALC.CONT
ALC.DET
DRV(+)
A5V
R5KM 8.2K
R5KL 82
C5KB 3.3μ 6.3V
Q5KM
IMT1
Q5LB
R5LL 4.7K
R5KE 470
DRV
ZMT(+)
ZMT(-)
ZMP.1
ZMP
ZMP.0
LED(+)
F.ENC
LED(-)
FMT.2
FMT.4
FMT.1
FMT.3
H.IN(+)
H.OUT(-)
H.IN(-)
H.OUT(+)
BRK(-)
BRK(+)
DRV(-)
DRV(+)
R5LN 390
R5LQ 1.5K-F
D5LA DAP202U
MA142WA
R5LP 510-F
CB
ALC.DET
ALC.CONT
A5V
BRK
R5LJ 8.2K-F
R5LH 22K-F
R5LG 680-F
1.8V
R5LM 56K
R5LE 330K
R5LK 2.2K
R5LC 2.2K
R5LZ 2.2K
R5LF 180K
C5LB 1000
R5LD 47K
C5LC K-.1
IC5LA
LM2902DB
C5LD Z-.1
R5LX 10K-F
C5LE Z-.1
R5LR 12K-F
R5LU 120K-F
R5LT 300K-F
C5LA Z-.1
R5LW 22K-F
R5LV 3.3K-F
R5LS 130K-F
R5LY 12K-F
I.HOLE.IN
Q5LC
DTA114EU
/UN5111
R5AJ 120
R5AH 4.3K-F
IC5AB
LM2904DB
C5AJ Z-.1
C5AH 1μ 25V
R5AG 33
R5AL 16K-F
R5AM 16K-F
R5BK 39K-F
Q5AA
2SC4098-P
2SC3936-B
Q5AC
IMX1
R5AE 4.7K
R5AF 4.7K
Q5AB
DTA114EU
/UN5111
R5AB 10K
R5AA 10K
C5AG Z-.1
C5AC Z-.1
R5AY 47K
ZM.FS
FADE.CNTL
FLK.CNTL
DA.Vref
AD.Vref
AVss
AVcc
Vcc
Vss
(P37/S.RDY)
(P37/S.RDY)
C.CLK(S.CLK)
DATA.CO(S.TX)
DATA.CI(S.RX)
(P33/PWMout)
FCS.CLK
NC
RST.FL
LED.ON
BF
FCS.CW
FCS.CLK
ZM.D1
ZM.D0
ZM.SPD
FCS.EBL
FCS.RST
UNREG
GND(URG)
1.8V


6
7
8
9
10
11
(PROCESS)PCB-SD/PC
SC
C C
C E
DAC.LAT
DAC.DAT
GA.HLSB
FADE
WB.REF
1.8V
R-Y
C5V
B-Y
Y.AF
HCK
ALC.DET
FLK.CONT
GND
C.BLK
Y.AGC.OUT
WHD
DAC.DAT.V
IDX
ALC.CONT
GS.V
GS.H
C5V(D)
C5V(A)
L5AD 82μH Low-R
L5AA 56μH Low-R
C5AA
C5AB Z-.1
C5AU 22μ 6.3V
R5CB 4.7K
C5CB J-12 CH
D5CA DAN202U /MA142WK
Q5GA IMX1
R5GA 2K-F
R5GB 1.3K-F
R5GC 1.3K-F
R5GD 220
ONLY FOR HS-CX1
R5DH 47K
R5DV 47K
IC5EA S2918IF
R5EA 47K
Q5AD
R5AS 18K
R5BG 47K
Q5FA
Q5FB 2SC4098-Q /2SC3936-C
Q5FC 2SC4098-Q /2SC3936-C
Q5FD 2SC4098-Q /2SC3936-C
D5FE DAP202U /MA142WK
LF5AA TH354LAI-5592
R5FZ 10K
R5FH 1K
R5ED 22K
C5FE Z-.1
R5EA 3.9K
R5FB 5.1K-F
C5FC 270
R5FD 2.2K
C5FA J-100 CH
C5FB J-100 CH
R5FC 10K
C5AT Z-1μ
R5FF 10K
R5FE 100
C5FD Z-.1
R5FG 220
R5FJ 10K
1.8V
R5FU 560
Q5FJ 2SD1819A-S
R5EF 3.9K
R5FQ 5.1K-F
C5FM Z-.1
R5FS 6.8K
C5FG J-33
C5FH J-33 CH
Q5FG
R5FK 330
R5FN 10K
R5FV 560
C5FQ J-4700 SL
R5FL 680
R5FY 10K
Q5FK 2SD1819A-S
C5FL Z-.1
R5FX 100
Q5FL 2SB1218-S
R5FT 6.8K
C5FY 22μ 6.3V
C5FZ Z-.1
R5FW 560
C5FP J-4700
200KHz
500KHz
1MHz
C5GA Z-.1
R5US 0
IC5GA
CF79114 (HS-CX4)
CF79104 (HS-CX1)
C5GB Z-.1
C5GE Z-1μ
C5GD Z-.1
R5GE 820
R5JT
C5GC
Vref(T)
Vref(B)
A5V
W.BLK
WBLK.DTS
C.SYNC
GND
P.DET
VDX
CP2
HDX
DL.PWR
IDTG
SSG.CLK
SS4
SS3
SS2
SS1
FCK
IC5AA
M37450M8-470FP
C5AG Z-.1
R5AB 10K
R5AA 10K
C5AC Z-.1
R5AY 47K
R5RA 10K
C5RA Z-.1
IC5RA PST529CMT
IC4AA
MN73033XRA
C4AA Z-.1
R4AA 4.7K-F
C4AB 100 CH
HD
DL.PWR
P.DET
VD
C.STRB
LED.ON
BF
D5V
R4CP 4.7K
R4BF 4.7K
R5AD 2.2K
R5AC 2.2K
UNREG
GND(URG)
DATA.CO
DATA.OC
C.CLK
Z5AA
WRITE
C.STRB
DATA.OC
DATA.CO
C.CLK
GND
GND(URG)
DAC.DAT.V
DAC.CLK
DAC.LAT
CP2
BF
VD
HD
C.STRB
C.CLK
DATA.CO
DATA.OC
UNREG
C A
VA
PCB-VTR(TELOP)

(CAMERA CONTROL)

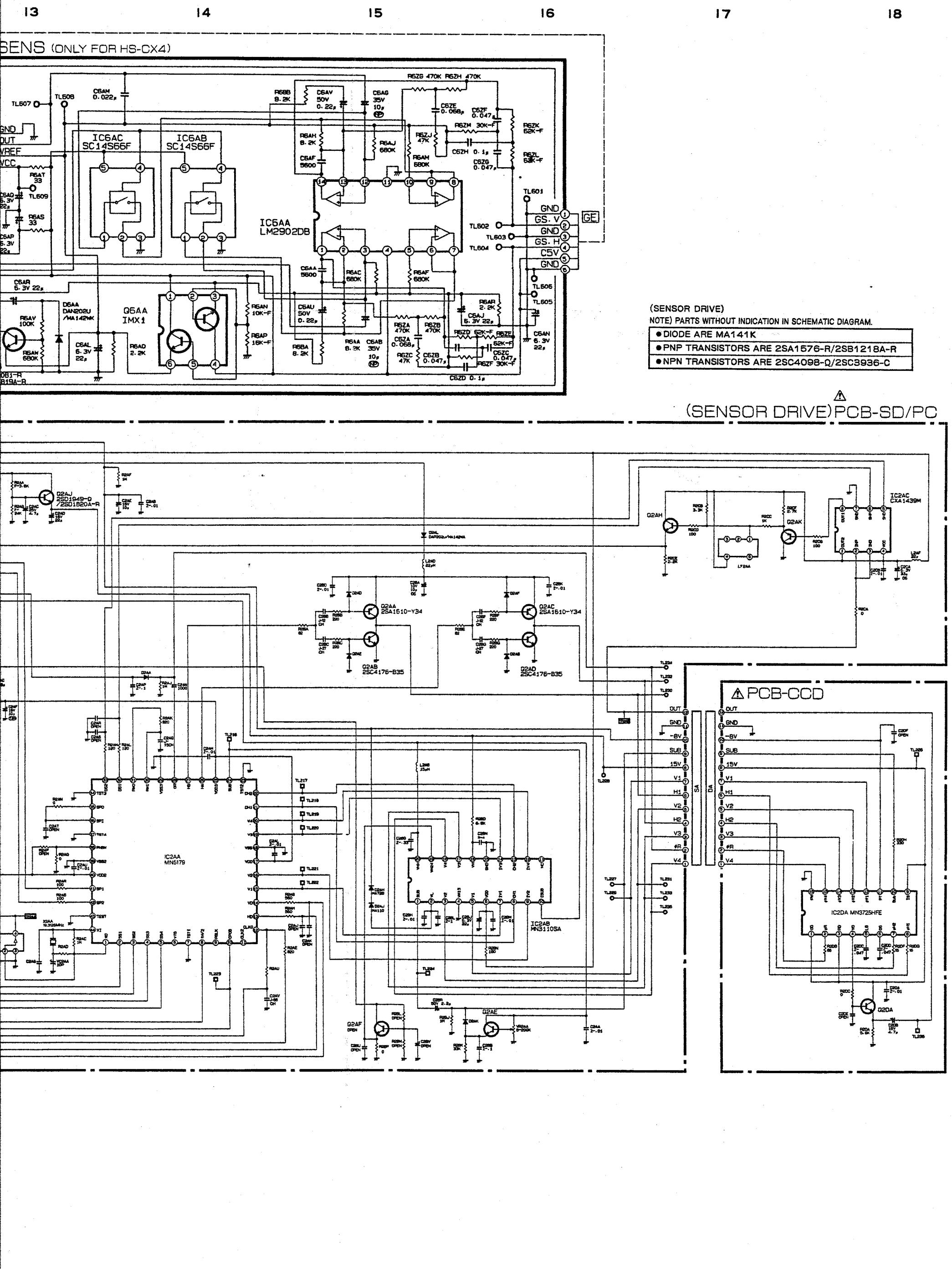
NOTE) PARTS WITHOUT INDICATION IN SCHEMATIC DIAGRAM.

- ●PNP TRANSISTORS ARE 2SA1576-R/2SB1218A-R
- ●NPN TRANSISTORS ARE 2SC4081-R/2SD1819A-R
- ●PNP DIGITAL TRANSISTORS ARE DTA144EU/UN5113
- ●NPN DIGITAL TRANSISTORS ARE DTC144EU/UN5213


10
11
12
13
14
15
⚠ PCB-GYRO SENS (ONLY FOR HS-CX4)
ANGULAR VELOCITY SENSOR(V)
Z6AB
GND
VCC
VREF
OUT
CASE
GV
ANGULAR VELOCITY SENSOR(H)
Z6AA
IC6AC SC14S66F
IC6AB SC14S66F
IC6AA LM2902DB
Q6AA IMX1
Q6AC DTA144EU /UN5113
Q6AB 2SC4081-R /2SD1819A-R
D6AA DAN202U /MA142WK
Q5FJ 2SD1819A-S
Q5FK 2SD1819A-S
Q5FL 2SB1218-S
Q5FG
W.BLK
WBLK.DIS
C.SYNC
GND
P.DET
VDX
CP2
HDX
DL.PWR
IDTG
SSG.CLK
SS4
SS3
SS2
SS1
FCK
CD
TO PC
WRITE
C.STRB
DATA.OC
DATA.CO
C.CLK
TO EVR CONTROLER (FOR ADJUSTMENT)
R4AA 4.7K-F
C4AB 100 CH
-8V
5V-1
8.5V
18V
5V-2
CDS.OUT
WBLKDIS
SP1
SP2
CSYNC
OR.BIAS
CPOB
1HCCD
Q2AJ 2SD1949-Q /2SD1820A-R
IC2AA MN5179
IC2AD SC7SU04F
Q2AA 2SA1610-Y34
Q2AB 2SC4176-B35
Q2AF
Q2AE
D2AL DAP202U/MA142WA

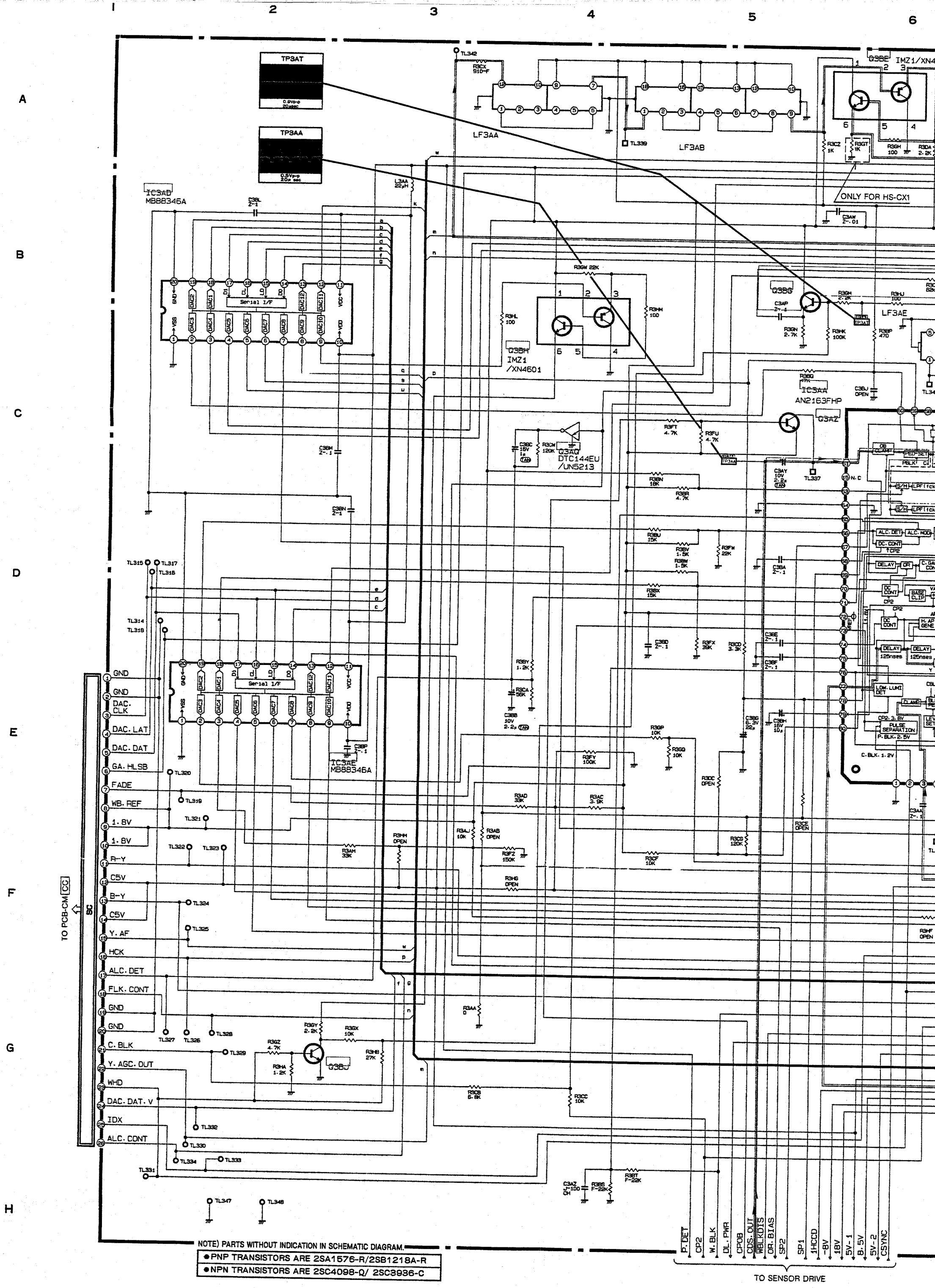
...DICATION IN SCHEMATIC DIAGRAM.

S ARE 2SA1576-R/2SB1218A-R
S ARE 2SC4081-R/2SD1819A-R
NSISTORS ARE DTA144EU/UN5113
NSISTORS ARE DTC144EU/UN5213


13
14
15
16
17
18
SENS (ONLY FOR HS-CX4)
IC6AC SC14S66F
IC6AB SC14S66F
IC6AA LM2902DB
Q6AA IMX1
D6AA DAN202U /MA142WK
TL601
TL602
TL603
TL604
TL605
TL606
TL607
TL608
TL609
GND
GS. V
GND
GS. H
C5V
GND
GE
(SENSOR DRIVE)PCB-SD/PC
Q2AJ 2SD1949-Q /2SD1820A-R
Q2AA 2SA1610-Y34
Q2AB 2SC4176-B35
Q2AC 2SA1610-Y34
Q2AD 2SC4176-B35
Q2AH
Q2AK
IC2AC CXA1439M
IC2AA MN5179
IC2AB MN3110SA
Q2AE
Q2AF
PCB-CCD
IC2DA MN3725HFE
Q2DA
OUT
GND
-8V
SUB
15V
V1
H1
V2
H2
V3
φR
V4

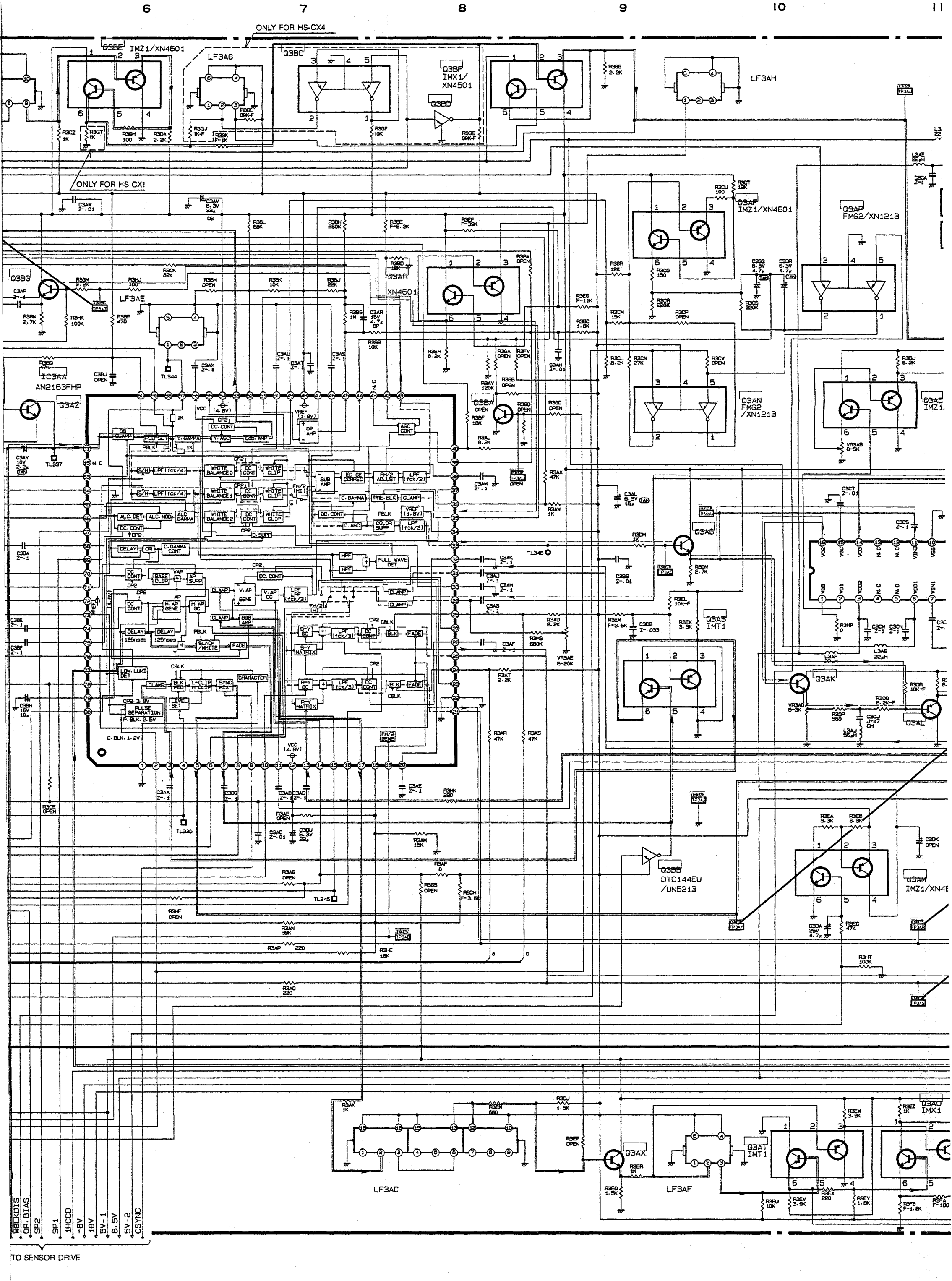
(SENSOR DRIVE)
NOTE) PARTS WITHOUT INDICATION IN SCHEMATIC DIAGRAM.

- ●DIODE ARE MA141K
- ●PNP TRANSISTORS ARE 2SA1576-R/2SB1218A-R
- ●NPN TRANSISTORS ARE 2SC4098-Q/2SC3936-C

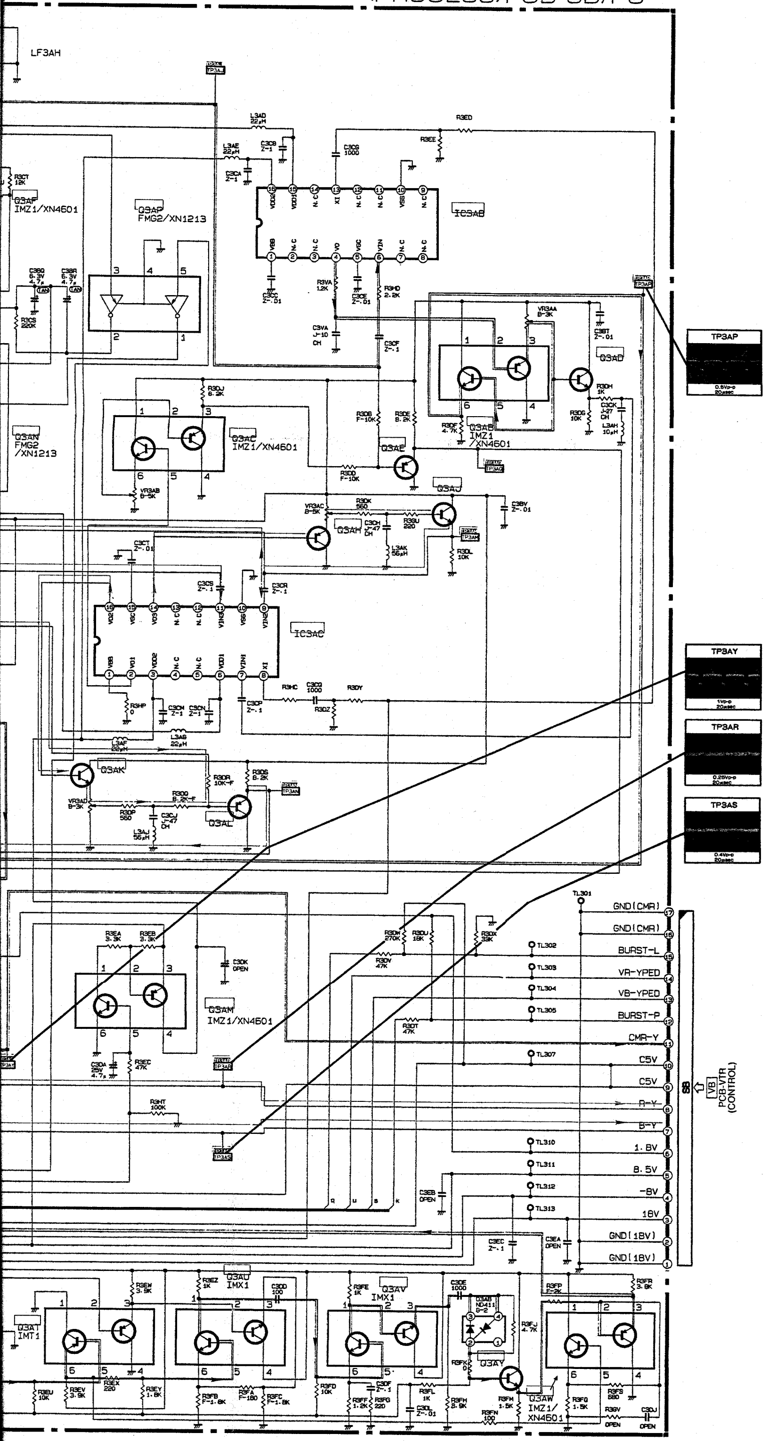

1
2
3
4
5
6
A
B
C
D
E
F
G
H
TP3AT
0.9Vp-p
20μsec
TP3AA
0.5Vp-p
20μ sec
TL342
R3CX
910-F
LF3AA
LF3AB
TL339
Q3BE IMZ1/XN4
R3CZ 1K
R3GT 1K
R3GH 100
R3DA 2.2K
ONLY FOR HS-CX1
C3AW Z-.01
L3AA 22μH
IC3AD
MB88346A
C3BL Z-1
GND
DAC2
DAC1
D1
CL
LD
DO
DAC12
DAC11
VCC
Serial I/F
VSS
DAC3
DAC4
DAC5
DAC6
DAC7
DAC8
DAC9
DAC10
VDD
R3GW 22K
R3HL 100
R3HM 100
Q3BH
IMZ1
/XN4601
Q3BG
C3AP
R3GM 2.2K
R3HJ 100
TP3AT
LF3AE
R3GN 2.7K
R3HK 100K
R3BP 470
R3BQ 47K
IC3AA
AN2163FHP
C3BJ OPEN
Q3AZ
C3BC 16V 1μ TAN
R3CW 120K
Q3AQ
DTC144EU
/UN5213
R3FT 4.7K
R3FU 4.7K
TP3AA
C3AY 10V 2.2μ TAN
TL337
N.C
C3BM Z-.1
C3BN Z-1
R3BN 18K
R3BR 4.7K
R3BU 15K
R3BV 1.5K
R3BW 1.5K
R3FW 22K
C3BA Z-.1
R3BX 15K
TL315
TL317
TL316
TL314
TL318
C3BD Z-.1
R3FX 39K
R3CD 3.3K
C3BE Z-.1
C3BF Z-.1
R3BY 1.2K
R3CA 56K
C3BB 10V 2.2μ TAN
C3BG NP 6.3V 22μ
C3BH 16V 10μ
OB CLAMP
PED-SET
PBLK
S/H
LPF(fck)
ALC.DET
ALC.MOD
DC.CONT
CP2
DELAY
OR
C.GA CON
DC CONT
BASE CLIP
H.AP GENE
DELAY 125nsec
LOW.LUMI DET
CLAMP
CP2.3.8V
PULSE SEPARATION
P.BLK.2.5V
C.BLK.1.2V
C3BP Z-.1
IC3AE
MB88346A
R3GP 10K
R3GQ 10K
R3FY 100K
R3DC OPEN
R3CE OPEN
R3CG 120K
R3AD 33K
R3AC 3.9K
R3AJ 10K
R3AB OPEN
R3FZ 150K
R3HH OPEN
R3AH 33K
R3CF 10K
R3HG OPEN
C3AA Z-.1
R3HF OPEN
GND
GND
DAC.CLK
DAC.LAT
DAC.DAT
GA.HLSB
FADE
WB.REF
1.8V
1.8V
R-Y
C5V
B-Y
C5V
Y.AF
HCK
ALC.DET
FLK.CONT
GND
GND
C.BLK
Y.AGC.OUT
WHD
DAC.DAT.V
IDX
ALC.CONT
TO PCB-CM CC
SC
TL320
TL319
TL321
TL322
TL323
TL324
TL325
TL327
TL326
TL328
TL329
TL332
TL330
TL334
TL333
TL331
TL347
TL348
R3AA 0
R3GY 2.2K
R3GX 10K
R3GZ 4.7K
R3HA 1.2K
Q3BJ
R3HB 27K
R3CB 6.8K
R3CC 10K
C3AZ CH 100
R3BS F-22K
R3BT F-22K
P.DET
CP2
W.BLK
DL.PWR
CPOB
CDS.OUT
WBLKDIS
DR.BIAS
SP2
SP1
1HCCD
-8V
18V
5V-1
B.5V
5V-2
CSYNC
TO SENSOR DRIVE

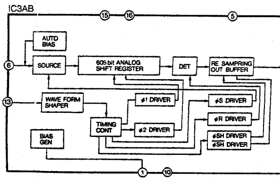
NOTE) PARTS WITHOUT INDICATION IN SCHEMATIC DIAGRAM.

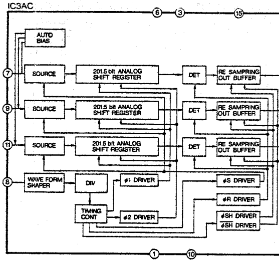
- ●PNP TRANSISTORS ARE 2SA1576-R/2SB1218A-R
- ●NPN TRANSISTORS ARE 2SC4098-Q/ 2SC3936-C


6
7
8
9
10
ONLY FOR HS-CX4
Q3BE IMZ1/XN4601
LF3AG
Q3BC
Q3BF IMX1/XN4501
Q3BD
LF3AH
R3CZ 1K
R3GT 1K
R3GH 100
R3DA 2.2K
R3GJ 1K-F
R3GK F-1K
R3GL 39K-F
R3GF 10K
R3GE 39K-F
R3GG 2.2K
ONLY FOR HS-CX1
C3AW Z-.01
C3AV 6.3V 33μ
R3BL 68K
R3BH 560K
R3BE F-8.2K
R3EF F-39K
R3CU 100
R3CT 12K
Q3AF IMZ1/XN4601
Q3AP FMG2/XN1213
Q3BG
C3AP
R3GM 2.2K
R3HJ 100
R3CK 82K
R3BM OPEN
R3BK 10K
R3BJ 22K
R3BD 18K
Q3AR XN4601
R3BA OPEN
LF3AE
R3GN 2.7K
R3HK 100K
R3BP 470
R3BG 1M
C3AR 16V 4.7μ BP
R3BB 10K
R3ES F-11K
R3BR 12K
R3CQ 150
R3CR 220K
R3CM 15K
R3CP OPEN
R3BC 1.8K
C3BQ 6.3V 4.7μ
C3BR 6.3V 4.7μ
R3CS 220K
R3BQ 47K
IC3AA AN2163FHP
Q3AZ
C3BJ OPEN
TL344
C3AX Z-.1
C3AU Z-.1
C3AT Z-.1
C3AS Z-.1
R3EH 8.2K
R3GA OPEN
R3FV OPEN
R3AY 120K
R3GB OPEN
C3AN Z-.01
R3CL 8.2K
R3CN 27K
R3CV OPEN
Q3AN FMG2/XN1213
R3DJ 8.2K
Q3AC IMZ1
Q3BA OPEN
R3BF 18K
R3GD OPEN
R3GC OPEN
R3AL 8.2K
VCC
(4.8V)
VREF (1.8V)
OP AMP
AGC CONT
CP2
DC CONT
OB CLAMP
PED SET
Y.GAMMA
Y.AGC
6dB AMP
PBLK
1K
C3AY 10V 2.2μ
TL337
N.C
S/H
LPF(fck/4)
WHITE BALANCE 0
WHITE BALANCE 1
WHITE BALANCE 2
DC CONT
WHITE CLIP
SUB AMP
ED GE CORREC
FH/2 ADJUST
LPF (fck/2)
FH/2 (H)
C.GAMMA
PRE.BLK
CLAMP
DC CONT
VREF (1.8V)
ALC.DET
ALC.MOD
ALC GAMMA
C.AGC
COLOR SUPP
LPF (fck/3)
C.SUPP
R3AX 47K
C3AM Z-.1
TP3AU OPEN
C3AL 6.3V 15μ
R3AW 1K
C3CT Z-.01
C3CS Z-.1
C3BA Z-.1
DELAY
OR
C.GAMMA CONT
HPF
FULL WAVE DET
TL346
R3DM 1K
Q3AG
R3DN 2.7K
C3BS Z-.01
C3AK Z-.1
C3AJ Z-.1
C3AH Z-.1
C3AG Z-.1
VAP
DC CONT
BASE CLIP
AP SUPP
V.AP GENE
V.AP GC
LPF (fck/3)
H.AP GENE
H.AP GC
AP
6dB AMP
B-Y GC
B-Y MATRIX
R-Y GC
R-Y MATRIX
BLK
FADE
DELAY 125nsec
BLACK /WHITE
PBLK
CBLK
LOW LUMI DET
L-CLIP H-CLIP
SYNC MIX
CHARACTOR
BLK PED
PULSE SEPARATION
LEVEL SET
CP2.3.8V
P.BLK.2.5V
C.BLK.1.2V
FH/2 GENE
C3BE Z-.1
C3BF Z-.1
C3BH 16V 10μ
R3EL 10K-F
R3EM F-3.6K
C3DB Z-.033
R3EK 3.3K
Q3AS IMT1
R3AU 2.2K
R3HS 680K
VR3AE B-20K
C3AF Z-.1
R3AT 2.2K
R3AR 47K
R3AS 47K
R3HP 0
C3CM Z-1
C3CN Z-1
L3AF 22μH
L3AG 22μH
Q3AK
R3DR 10K-F
R3DQ 8.2K-F
VR3AD B-3K
R3DP 560
C3CJ Z-.47
L3AJ 56μH
Q3AL
VR3AB B-5K
L3AE 22μH
C3CA Z-1
VD2
VGC
VD3
N.C
VIN1
VSS
VBB
VD1
VIN1
C3AA Z-.1
C3DG Z-.1
C3AB Z-.1
C3AD Z-.1
C3AE Z-.1
R3HN 220
R3CE OPEN
TL335
R3AE OPEN
TP3AJ
C3AC Z-.01
C3BU 6.3V 22μ
R3AM 15K
R3AF 0
R3AG OPEN
R3GS OPEN
R3CH F-3.6K
TL345
Q3BB DTC144EU /UN5213
R3EA 3.3K
R3EB 3.3K
C3DK OPEN
Q3AM IMZ1/XN4601
C3DA 25V 4.7μ
R3EC 47K
TP3AY
TP3AR
R3HF OPEN
R3AN 39K
TP3AB
R3AP 220
R3HE 18K
R3HT 100K
R3AQ 220
TP3AS
R3AK 1K
R3EN 680
R3CJ 1.5K
R3EP OPEN
Q3AX
R3ER 1K
R3EQ 1.5K
LF3AC
LF3AF
Q3AT IMT1
R3EW 3.9K
R3EZ 1K
Q3AU IMX1
R3EU 10K
R3EV 3.9K
R3EX 220
R3EY 1.8K
R3FB F-1.8K
WBLKDIS
OR.BIAS
SP2
SP1
1HCCD
-8V
16V
5V-1
8.5V
5V-2
CSYNC
TO SENSOR DRIVE

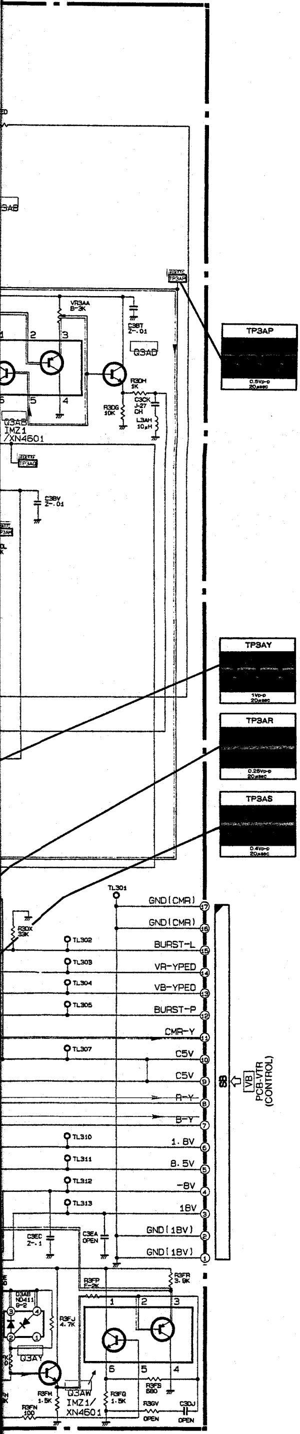
⚠ (PROCESS)PCB-SD/PC

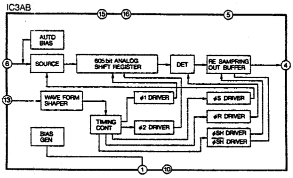

LF3AH
TP3AJ
L3AD 22μH
L3AE 22μH
C3CB Z-1
C3CA Z-1
C3CG 1000
R3ED
R3EE
VDD2 VDD1 N.C XI N.C N.C VSS N.C
VBB N.C N.C VO VGC VIN N.C N.C
IC3AB
C3CC Z-.01
R3VA 1.2K
C3CE Z-.01
R3HD 2.2K
C3VA J-10 CH
C3CF Z-.1
R3CT 12K
Q3AF IMZ1/XN4601
Q3AP FMG2/XN1213
C3BQ 6.3V 4.7μ TAN
C3BR 6.3V 4.7μ TAN
R3CS 220K
TP3AP
VR3AA B-3K
C3BT Z-.01
Q3AD
R3DH 1K
C3CK J-27 CH
L3AH 10μH
R3DG 10K
R3DF 4.7K
Q3AB IMZ1 /XN4601
R3DB F-10K
R3DE 8.2K
Q3AE
TP3AQ
R3DD F-10K
Q3AJ
R3DJ 8.2K
Q3AN FMG2 /XN1213
Q3AC IMZ1/XN4601
VR3AB B-5K
VR3AC B-5K
R3DK 560
Q3AH
C3CH J-47 CH
R3GU 220
C3BV Z-.01
TP3AM
L3AK 56μH
R3DL 10K
C3CT Z-.01
C3CS Z-.1
C3CR Z-.1
VO2 VGC VO3 N.C N.C VIN3 VSS VIN2
VBB VO1 VDD2 N.C N.C VDD1 VIN1 XI
IC3AC
R3HP 0
C3CM Z-1
C3CN Z-1
C3CP Z-.1
R3HC
C3CQ 1000
R3DY
R3DZ
L3AF 22μH
L3AG 22μH
Q3AK
R3DR 10K-F
R3DS 8.2K
TP3AN
VR3AD B-3K
R3DQ 8.2K-F
R3DP 560
C3CJ J-47 CH
L3AJ 56μH
Q3AL
TP3AP 0.5Vp-p 20μsec
TP3AY 1Vp-p 20μsec
TP3AR 0.25Vp-p 20μsec
TP3AS 0.4Vp-p 20μsec
R3EA 3.3K
R3EB 3.3K
C3DK OPEN
Q3AM IMZ1/XN4601
TP3AY
C3DA 25V 4.7μ
R3EC 47K
TP3AR
R3HT 100K
TP3AS
R3DW 270K
R3DU 18K
R3DX 33K
R3DV 47K
R3DT 47K
q u s k
TL301
TL302
TL303
TL304
TL305
TL307
TL310
TL311
TL312
TL313
C3EB OPEN
C3EC Z-.1
C3EA OPEN
GND(CMR) ⑰
GND(CMR) ⑯
BURST-L ⑮
VR-YPED ⑭
VB-YPED ⑬
BURST-P ⑫
CMR-Y ⑪
C5V ⑩
C5V ⑨
R-Y ⑧
B-Y ⑦
1.8V ⑥
8.5V ⑤
-8V ④
18V ③
GND(18V) ②
GND(18V) ①
SB
VB
PCB-VTR (CONTROL)
Q3AT IMT1
R3EW 3.9K
R3EU 10K
R3EV 3.9K
R3EX 220
R3EY 1.8K
R3EZ 1K
Q3AU IMX1
C3DD 100
R3FB F-1.8K
R3FA F-180
R3FC F-1.8K
R3FE 1K
Q3AV IMX1
R3FD 10K
R3FF 1.2K
R3FG 220
C3DF Z-.1
C3DL Z-.01
R3FL 1K
C3DE 1000
D3AB ND411 S-2
R3FJ 4.7K
R3FK 0
Q3AY
R3FH 8.9K
R3FM 1.5K
R3FN 100
Q3AW IMZ1/ XN4601
R3FP F-2K
R3FR 3.9K
R3FQ 1.5K
R3FS 680
R3GV OPEN
C3DJ OPEN

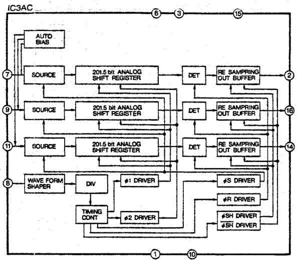

IC3AB
⑮ ⑯ ⑤
AUTO BIAS
⑥
SOURCE
605 bit ANALOG SHIFT REGISTER
DET
RE SAMPRING OUT BUFFER
⑬
WAVE FORM SHAPER
φ1 DRIVER
φS DRIVER
φR DRIVER
TIMING CONT
φ2 DRIVER
φSH DRIVER
φSH DRIVER
BIAS GEN
① ⑩

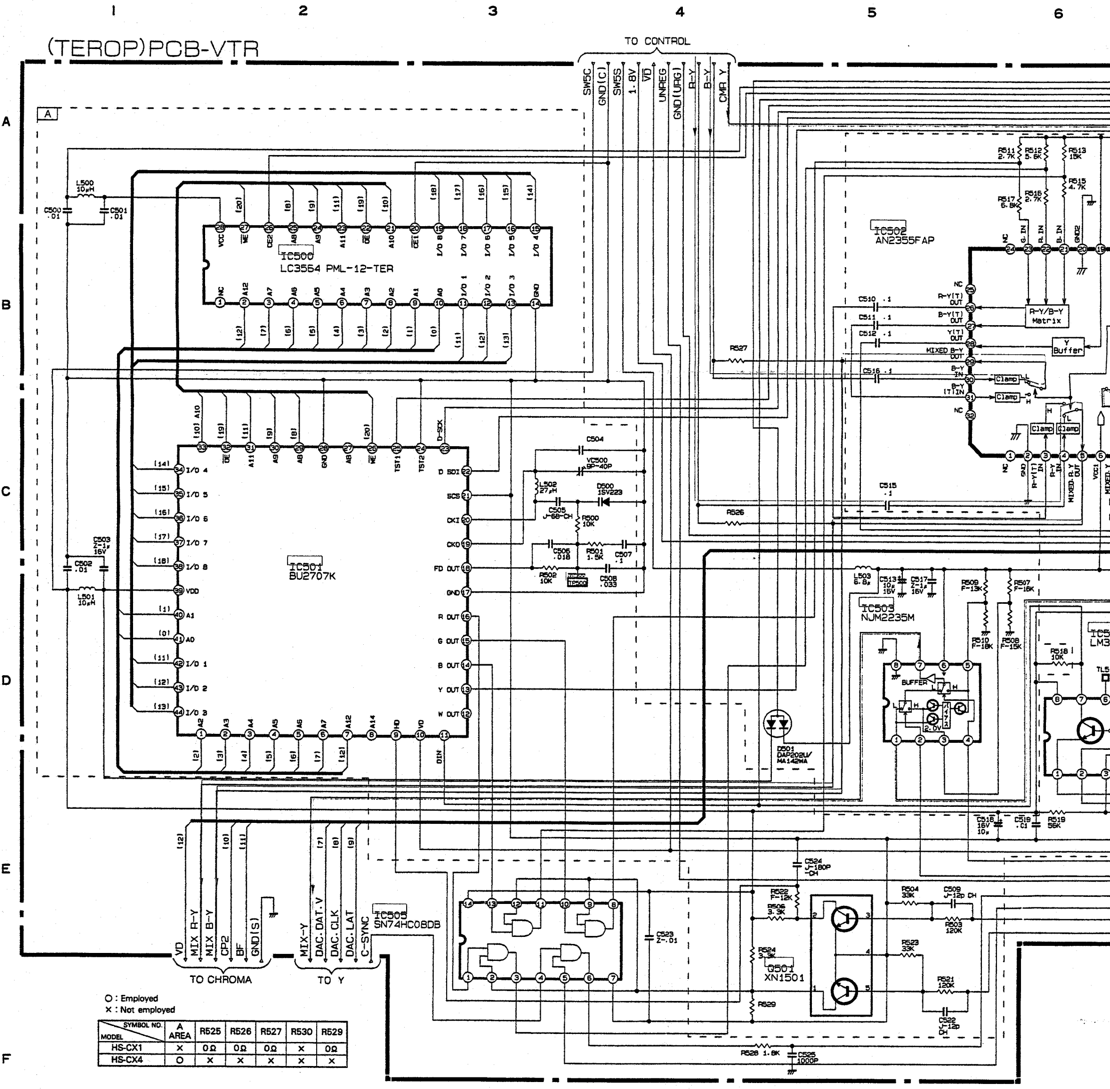

IC3AC
⑥ ③ ⑮
AUTO BIAS
⑦
SOURCE
201.5 bit ANALOG SHIFT REGISTER
DET
RE SAMPRING OUT BUFFER
⑨
SOURCE
201.5 bit ANALOG SHIFT REGISTER
DET
RE SAMPRING OUT BUFFER
⑪
SOURCE
201.5 bit ANALOG SHIFT REGISTER
DET
RE SAMPRING OUT BUFFER
⑧
WAVE FORM SHAPER
DIV
φ1 DRIVER
φS DRIVER
φR DRIVER
TIMING CONT
φ2 DRIVER
φSH DRIVER
φSH DRIVER
① ⑩

SS)PCB-SD/PC


VR3AA
B-3K
C3BT
Z-.01
Q3AD
R3DH
1K
C3CK
J-27
CH
R3DG
10K
L3AH
10μH
Q3AB
IMZ1
/XN4601
TP3AP
TP3AQ
C3BV
Z-.01
TP3AP
0.5Vp-p
20μsec
TP3AY
1Vp-p
20μsec
TP3AR
0.25Vp-p
20μsec
TP3AS
0.4Vp-p
20μsec
TL301
R3DX
33K
TL302
TL303
TL304
TL305
TL307
TL310
TL311
TL312
TL313
GND(CMR) 17
GND(CMR) 16
BURST-L 15
VR-YPED 14
VB-YPED 13
BURST-P 12
CMR-Y 11
C5V 10
C5V 9
R-Y 8
B-Y 7
1.8V 6
8.5V 5
-8V 4
18V 3
GND(18V) 2
GND(18V) 1
SB
VB
PCB-VTR
(CONTROL)
C3EC
Z-.1
C3EA
OPEN
R3FP
2.2K
R3FR
3.9K
D3AB
ND411
R3FJ
4.7K
Q3AY
Q3AW
IMZ1/
XN4601
R3FM
1.5K
R3FN
100
R3FQ
1.5K
R3FS
560
R3GV
OPEN
C3DJ
OPEN


IC3AB
AUTO BIAS
SOURCE
605 bit ANALOG SHIFT REGISTER
DET
RE SAMPRING OUT BUFFER
WAVE FORM SHAPER
φ1 DRIVER
φS DRIVER
φR DRIVER
TIMING CONT
φ2 DRIVER
φSH DRIVER
φSH DRIVER
BIAS GEN
15
16
5
6
4
13
1
10

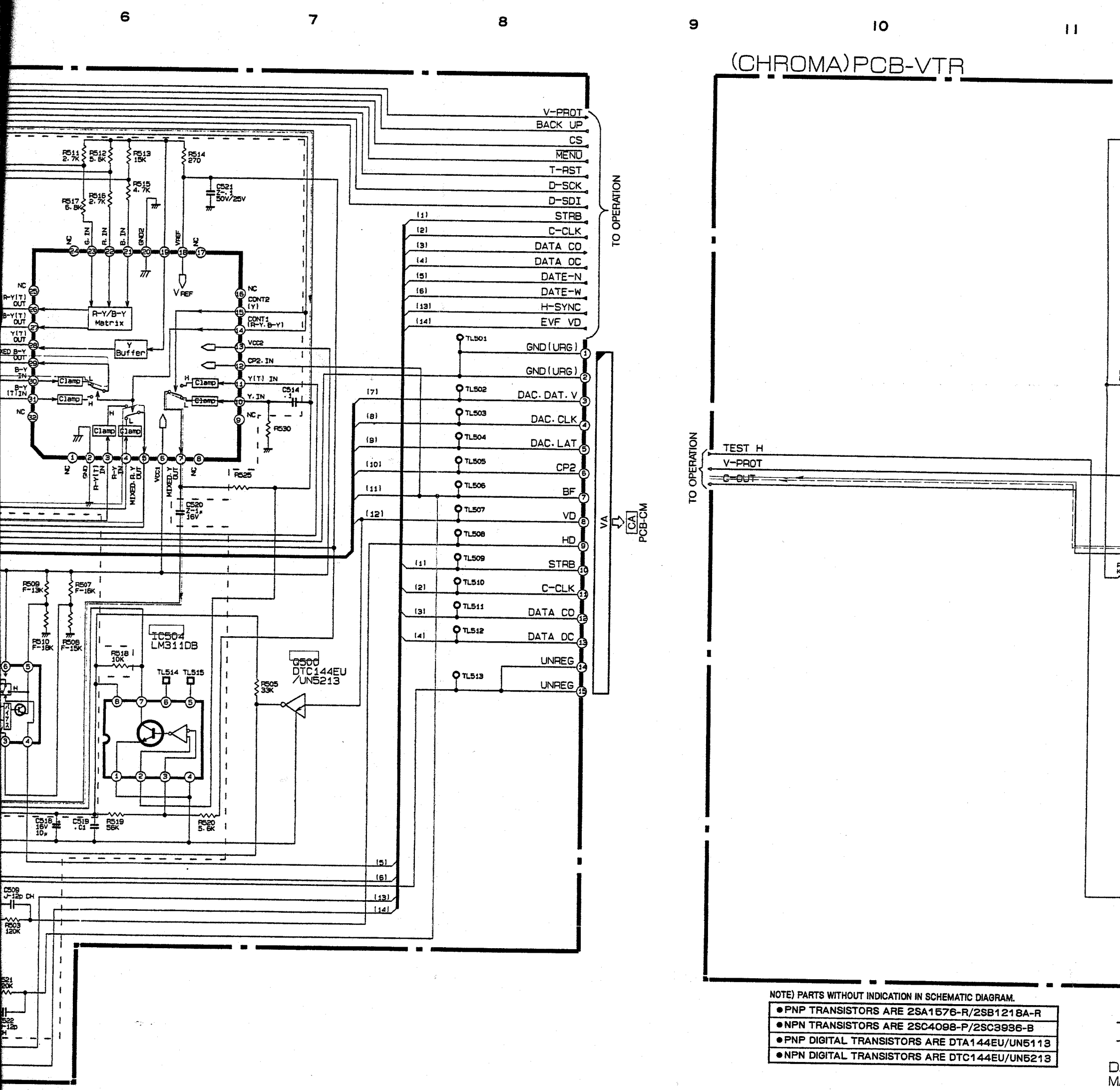

IC3AC
AUTO BIAS
SOURCE
201.5 bit ANALOG SHIFT REGISTER
DET
RE SAMPRING OUT BUFFER
WAVE FORM SHAPER
DIV
φ1 DRIVER
φS DRIVER
φR DRIVER
TIMING CONT
φ2 DRIVER
φSH DRIVER
φSH DRIVER
6
3
15
7
2
9
16
11
14
8
1
10


1
2
3
4
5
6
A
B
C
D
E
F
(TEROP)PCB-VTR
TO CONTROL
SW5C
GND(C)
SW5S
1.8V
VD
UNREG
GND(URG)
R-Y
B-Y
CMR Y
IC500
LC3554 PML-12-TER
IC501
BU2707K
IC502
AN2355FAP
IC503
NJM2235M
IC505
SN74HC08BDB
Q501
XN1501
D500
1SV223
D501
DAP202U/
MA142WA
R-Y/B-Y
Matrix
Y
Buffer
Clamp
BUFFER
L500
10μH
L501
10μH
L502
27μH
L503
6.8μ
C500
.01
C501
.01
C502
.01
C503
Z-1μ
16V
C504
VC500
6P-40P
C505
J-68-CH
C506
.018
C507
.1
C508
.033
C510 .1
C511 .1
C512 .1
C516 .1
C515
.1
C513
10μ
16V
C517
Z-1μ
16V
C518
16V
10μ
C519
.01
C523
Z-.01
C524
J-180P
-CH
C509
J-12p CH
C522
J-12p
CH
C525
1000P
R500
10K
R501
1.5K
R502
10K
R503
120K
R504
33K
R506
3.3K
R507
F-16K
R508
F-15K
R509
F-13K
R510
F-18K
R511
2.7K
R512
5.6K
R513
15K
R515
4.7K
R516
2.7K
R517
6.8K
R518
10K
R519
56K
R521
120K
R522
F-12K
R523
33K
R524
3.3K
R526
R527
R528 1.8K
R529
2.0V
TO CHROMA
VD
MIX R-Y
MIX B-Y
CP2
BF
GND(S)
TO Y
MIX-Y
DAC.DAT.V
DAC.CLK
DAC.LAT
C-SYNC
D SDI
SCS
CKI
CKO
FD OUT
GND
R OUT
G OUT
B OUT
Y OUT
W OUT
VDD
HD
VD
DIN
D-SCK
TST1
TST2
G.IN
R.IN
B.IN
GND2
R-Y(T) OUT
B-Y(T) OUT
Y(T) OUT
MIXED B-Y OUT
B-Y IN
B-Y (T)IN
MIXED R-Y OUT
VCC1
MIXED Y
NC

○ : Employed

× : Not employed

SYMBOL NO. / MODEL	A AREA	R525	R526	R527	R530	R529
HS-CX1	×	0Ω	0Ω	0Ω	×	0Ω
HS-CX4	○	×	×	×	×	×

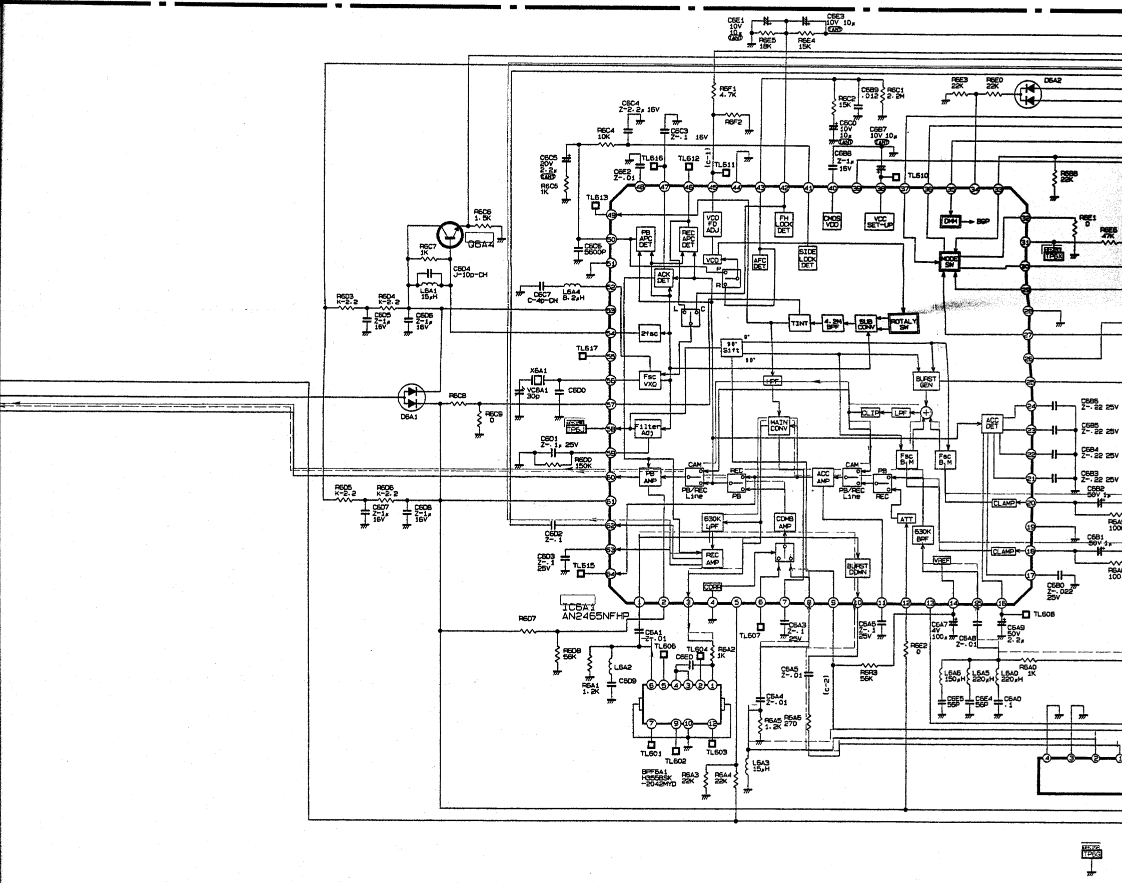

6
7
8
9
10
11
(CHROMA)PCB-VTR
V-PROT
BACK UP
CS
MENU
T-RST
D-SCK
D-SDI
STRB
C-CLK
DATA CO
DATA DC
DATE-N
DATE-W
H-SYNC
EVF VD
TO OPERATION
GND(URG)
GND(URG)
DAC. DAT. V
DAC. CLK
DAC. LAT
CP2
BF
VD
HD
STRB
C-CLK
DATA CO
DATA DC
UNREG
UNREG
VA
CA
PCB-CM
TL501
TL502
TL503
TL504
TL505
TL506
TL507
TL508
TL509
TL510
TL511
TL512
TL513
TL514
TL515
R511 2.7K
R512 5.6K
R513 15K
R514 270
R515 4.7K
R516 2.7K
R517 6.8K
C521 Z-1 50V/25V
G.IN
R.IN
B.IN
GND2
VREF
NC
R-Y(T) OUT
B-Y(T) OUT
Y(T) OUT
MIXED B-Y OUT
B-Y IN
B-Y (T) IN
R-Y/B-Y Matrix
Y Buffer
Clamp
CONT2 (Y)
CONT1 (R-Y, B-Y)
VCC2
CP2. IN
Y(T) IN
Y. IN
C514 .1
R530
R525
R-Y(T) IN
R-Y IN
MIXED R-Y OUT
VCC1
MIXED Y OUT
C520 Z-1 16V
R509 F-13K
R507 F-16K
R510 F-18K
R508 F-15K
IC504 LM311DB
R518 10K
R505 33K
Q500 DTC144EU /UN5213
C516 16V 10μ
C519 .01
R519 56K
R520 5.6K
C509 J-12p CH
R503 120K
TEST H
V-PROT
C-OUT
TO OPERATION

NOTE) PARTS WITHOUT INDICATION IN SCHEMATIC DIAGRAM.

- ●PNP TRANSISTORS ARE 2SA1576-R/2SB1218A-R
- ●NPN TRANSISTORS ARE 2SC4098-P/2SC3936-B
- ●PNP DIGITAL TRANSISTORS ARE DTA144EU/UN5113
- ●NPN DIGITAL TRANSISTORS ARE DTC144EU/UN5213

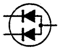
10 11 12 13 14 15

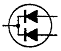
OMA)PCB-VTR

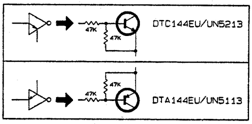

C6E1 10V 10µ
R6E5 18K
R6E4 15K
C6E3 10V 10µ
R6F1 4.7K
R6F2
R6C2 15K
C6B9 .012
R6C1 2.2M
R6E3 22K
R6E0 22K
D6A2
C6C4 Z-2.2µ 16V
C6C3 Z-.1 16V
R6C4 10K
C6C5 20V 2.2µ
R6C5 1K
C6E2 Z-.01
TL616
TL612
TL611
TL613
TL610
(c-1)
C6C0 10V 10µ
C6B7 10V 10µ
C6B8 Z-1µ 16V
R6B8 22K
R6E1 0
R6E6 47K
TP6X
Q6A4
R6C6 1.5K
R6C7 1K
C6D4 J-10p-CH
L6A1 15µH
R6D3 K-2.2
R6D4 K-2.2
C6D5 Z-1µ 16V
C6D6 Z-1µ 16V
C6C6 5600P
C6C7 C-40-CH
L6A4 8.2µH
PB APC DET
REC APC DET
VCO FD ADJ
FH LOCK DET
CMOS VDD
VCC SET-UP
DMM
BGP
MODE SW
AFC DET
SIDE LOCK DET
VCO
ACK DET
2fsc
TINT
4.2M BPF
SUB CONV
ROTALY SW
90° Sift
Fsc VXO
HPF
BURST GEN
CLIP
LPF
MAIN CONV
ACC DET
Filter Adj
PB AMP
CAM
REC
PB
PB/REC Line
ACC AMP
Fsc B,M
630K LPF
COMB AMP
ATT
630K BPF
REC AMP
BURST DOWN
CLAMP
VREF
CORR
IC6A1 AN2465NFHP
TL617
X6A1
VC6A1 30p
C6D0
D6A1
R6C8
R6C9 0
TP6J
C6D1 Z-.1µ 25V
R6D0 150K
R6D5 K-2.2
R6D6 K-2.2
C6D7 Z-1µ 16V
C6D8 Z-1µ 16V
C6D2 Z-.1
C6D3 Z-.1 25V
TL615
R6D7
R6D8 56K
C6A1 Z-.01
TL606
TL604
C6E0
R6A2 1K
L6A2
C6D9
R6A1 1.2K
TL601
TL602
TL603
BPF6A1 H355BSK -2042MYD
R6A3 22K
R6A4 22K
L6A3 15µH
C6A5 Z-.01
C6A4 Z-.01
R6A5 1.2K
R6A6 270
(c-2)
TL607
C6A3 Z-.1 25V
C6A6 Z-.1 25V
R6E2 0
R6B3 56K
C6A7 4V 100µ
C6A8 Z-.01
C6A9 50V 2.2µ
TL608
L6A6 150µH
L6A5 220µH
L6A0 220µH
R6A0 1K
C6E5 56P
C6E4 56P
C6A0 .1
C6B6 Z-.22 25V
C6B5 Z-.22 25V
C6B4 Z-.22 25V
C6B3 Z-.22 25V
C6B2 50V 1µ
C6B1 50V 1µ
C6B0 Z-.022 25V
TP6G

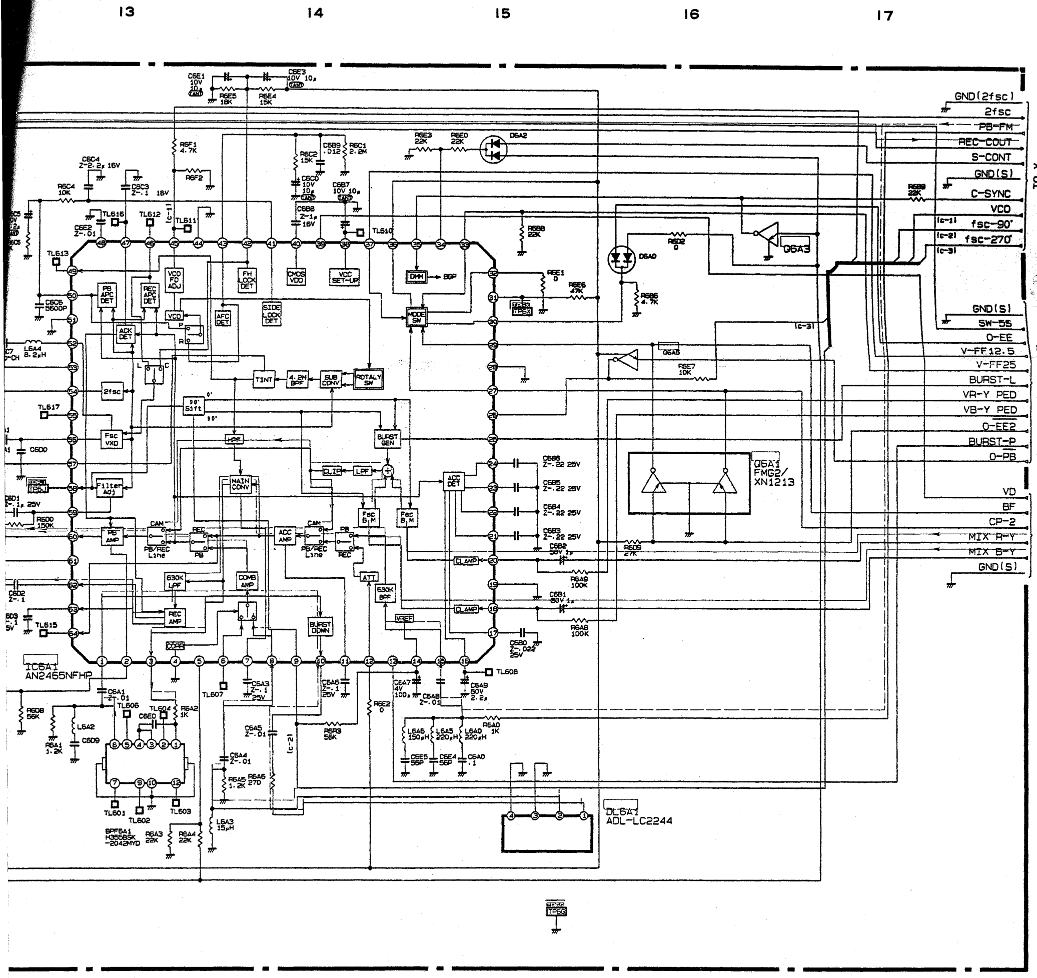
OTE) PARTS WITHOUT INDICATION IN SCHEMATIC DIAGRAM.

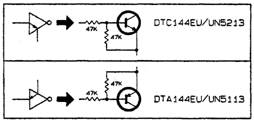
- PNP TRANSISTORS ARE 2SA1576-R/2SB1218A-R
- NPN TRANSISTORS ARE 2SC4098-P/2SC3936-B
- PNP DIGITAL TRANSISTORS ARE DTA144EU/UN5113
- NPN DIGITAL TRANSISTORS ARE DTC144EU/UN5213


DAP202U
MA142WA

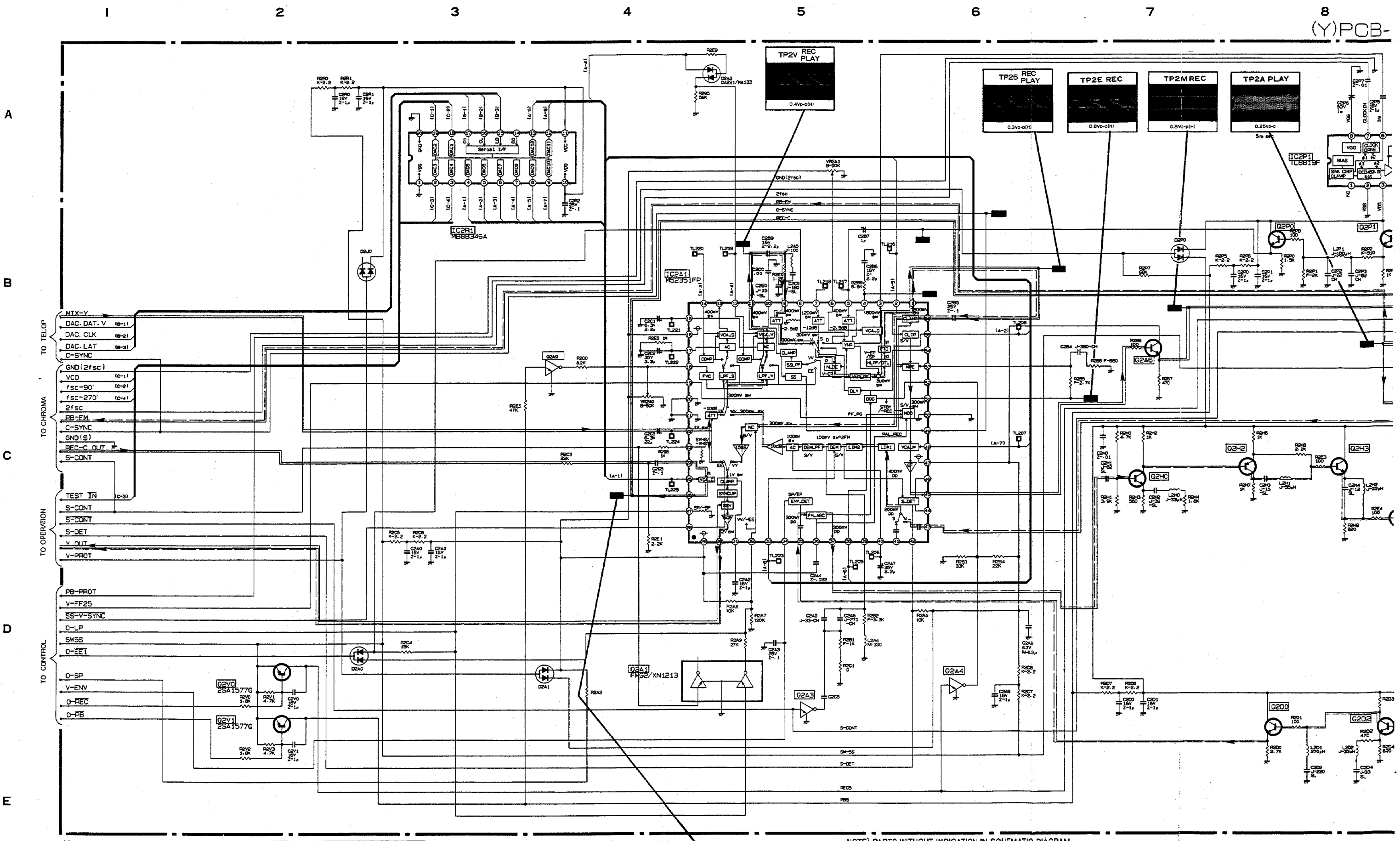

DAN202U
MA142WK


47K
47K
DTC144EU/UN5213
47K
47K
DTA144EU/UN5113

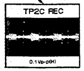

13
14
15
16
17
18
GND(2fsc)
2fsc
PB-FM
REC-COUT
S-CONT
GND(S)
C-SYNC
VCO
fsc-90°
fsc-270°
TO Y
GND(S)
SW-55
O-EE
V-FF12.5
V-FF25
BURST-L
VR-Y PED
VB-Y PED
O-EE2
BURST-P
O-PB
TO CONTROL
VD
BF
CP-2
MIX R-Y
MIX B-Y
GND(S)
TO TELOP
IC6A1
AN2465NFHP
Q6A1
FMG2/
XN1213
Q6A3
Q6A5
D6A2
D6A0
DL6A1
ADL-LC2244
BPF6A1
H355BSK
-2042MYD
PB APC DET
REC APC DET
VCO FD ADJ
FH LOCK DET
CMOS VDD
VCC SET-UP
DMM
BGP
MODE SW
AFC DET
SIDE LOCK DET
ACK DET
VCO
TINT
4.2M BPF
SUB CONV
ROTALY SW
2fsc
90° Sift
Fsc VXO
HPF
BURST GEN
MAIN CONV
CLIP
LPF
ACC DET
Filter ADJ
PB AMP
CAM
REC
PB/REC Line
ACC AMP
Fsc B,M
630K LPF
COMB AMP
ATT
630K BPF
REC AMP
BURST DOWN
CORR
VREF
CLAMP
TL601
TL602
TL603
TL604
TL605
TL606
TL607
TL608
TL610
TL611
TL612
TL613
TL615
TL616
TL617
TP6J
TP6X
TP6G
R6E5 18K
R6E4 15K
C6E1 10V 10μ
C6E3 10V 10μ
R6F1 4.7K
R6F2
C6C4 Z-2.2μ 16V
C6C3 Z-.1 16V
R6C4 10K
C6E2 Z-.01
R6C2 15K
C6B9 .012
R6C1 2.2M
C6C0 10V 10μ
C6B7 10V 10μ
C6B8 Z-1μ 16V
R6E3 22K
R6E0 22K
R6B8 22K
R6E1 0
R6E6 47K
R6D2 0
R6B6 4.7K
R6B9 22K
R6E7 10K
R6D9 27K
C6B6 Z-.22 25V
C6B5 Z-.22 25V
C6B4 Z-.22 25V
C6B3 Z-.22 25V
C6B2 50V 1μ
R6A9 100K
C6B1 50V 1μ
R6A8 100K
C6B0 Z-.022 25V
C6D5 5600P
L6A4 8.2μH
C6D0
C6D1 Z-.1μ 25V
R6D0 150K
C6D2 Z-.1
C6A1 Z-.01
R6D8 56K
L6A2
C6D9
R6A1 1.2K
C6E0
R6A2 1K
C6A3 Z-.1 25V
C6A6 Z-.1 25V
C6A7 4V 100μ
C6A8 Z-.01
C6A9 50V 2.2μ
R6E2 0
C6A5 Z-.01
R6A3 56K
R6A0 1K
L6A6 150μH
L6A5 220μH
L6A0 220μH
C6E5 56P
C6E4 56P
C6A0 .1
C6A4 Z-.01
R6A5 1.2K
R6A6 270
L6A3 15μH
R6A3 22K
R6A4 22K
(c-1)
(c-2)
(c-3)


47K
47K
DTC144EU/UN5213
47K
47K
DTA144EU/UN5113

(Y)PCB-

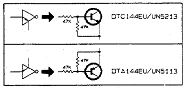


1
2
3
4
5
6
7
8
A
B
C
D
E
TP2V REC PLAY
0.4Vp-p(H)
TP25 REC PLAY
0.3Vp-p(H)
TP2E REC
0.8Vp-p(H)
TP2M REC
0.8Vp-p(H)
TP2A PLAY
0.25Vp-p
5m sec
IC2R1
MB88346A
Serial I/F
IC2A1
M52351FP
IC2P1
TL8819F
IC2A1
FMG2/XN1213
D2A3
DA221/MA133
Q2V0
2SA1577G
Q2V1
2SA1577G
TO TELOP
MIX-Y
DAC. DAT. V
DAC. CLK
DAC. LAT
C-SYNC
TO CHROMA
GND(2fsc)
VCO
fsc-90°
fsc-270°
2fsc
PB-FM
C-SYNC
GND(S)
REC-C OUT
S-CONT
TO OPERATION
TEST IN
S-CONT
S-CONT
S-DET
Y OUT
V-PROT
TO CONTROL
PB-PROT
V-FF25
SS-V-SYNC
O-LP
SW5S
O-EEI
O-SP
V-ENV
O-REC
O-PB
Q2A9
Q2A3
Q2A4
Q2A6
Q2P0
Q2P1
Q2H0
Q2H2
Q2H3
Q2D0
Q2D2
D2J0
D2A0
D2A1
D2P0
VR2A1
B-50K
VR2A0
B-50K
S-CONT
SW-5S
S-DET
REC5
PB5



(Y)

SYMBOL NO. / MODELS	R2D3	Q2A3	C2C8
HS-CX1	470	×	×
HS-CX4	560	×	×

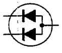


47K
47K
DTC144EU/UN5213
47K
47K
DTA144EU/UN5113

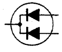
A-1	C-LEV	A-7	FM-LEV
A-2	DEV	A-8	PB-LEV
A-3	S-VHS-LEV	C-1	VCO
A-4	VHS-LEV	C-2	fsc-90°
A-5	CLIP-LEV	C-3	TEST IN
A-6	CAR-SET	C-4	fsc-270°

NOTE) PARTS WITHOUT INDICATION IN SCHEMATIC DIAGRAM.

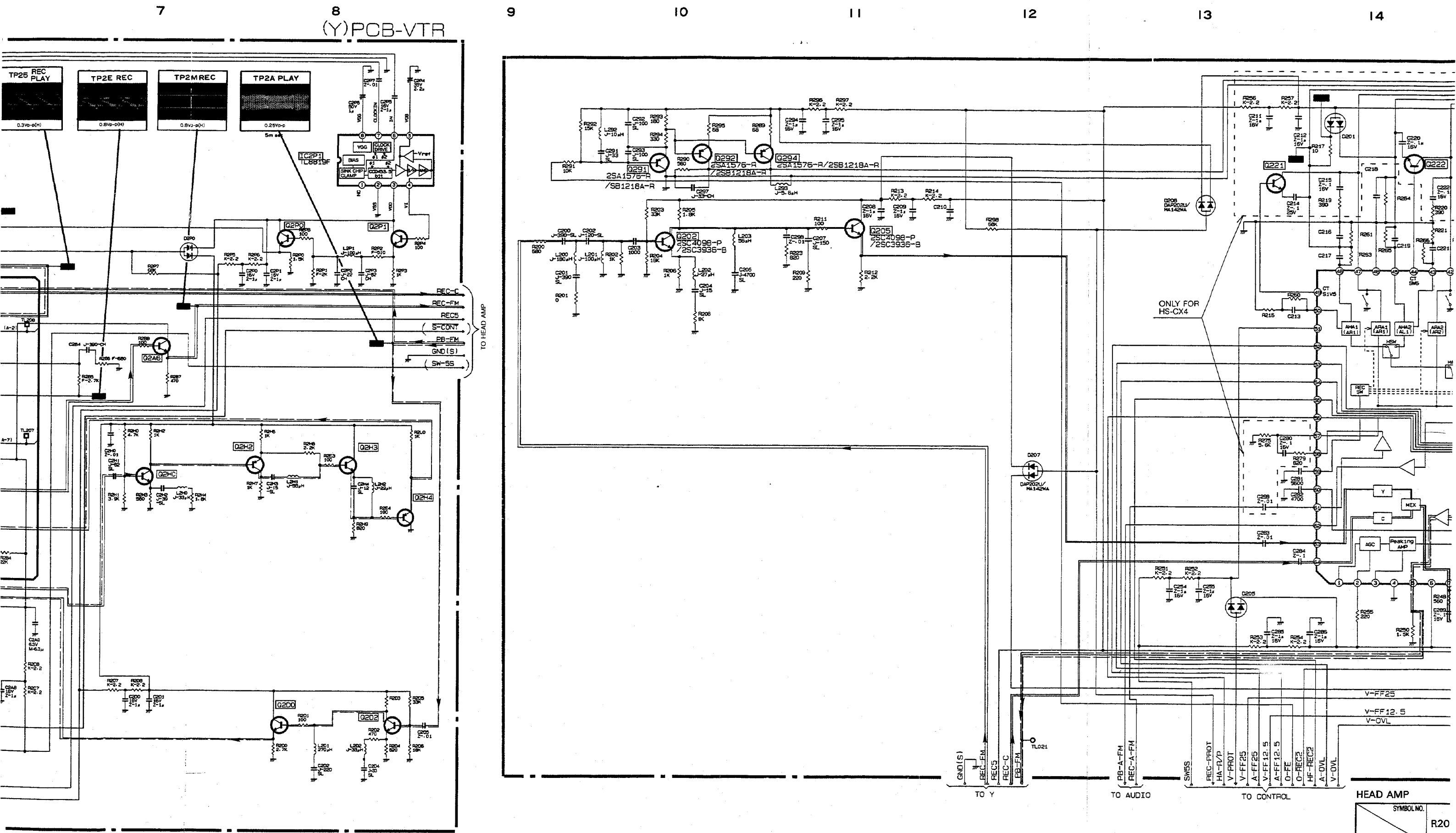
- ●PNP TRANSISTORS ARE 2SA1576-R/2SB1218A-R
- ●NPN TRANSISTORS ARE 2SC4098-P/2SC3936-B
- ●PNP DIGITAL TRANSISTORS ARE DTA144EU/UN5113
- ●NPN DIGITAL TRANSISTORS ARE DTC144EU/UN5213



DAP202U
MA142WA

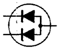


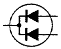
DAN202U
MA142WK


7
8
9
10
11
12
13
14
(Y)PCB-VTR
TP25 REC PLAY
TP2E REC
TP2M REC
TP2A PLAY
IC2P1 TL6819F
Q2P0
Q2P1
Q2A6
Q2H2
Q2H3
Q2HC
Q2H4
Q2D0
Q202
REC-C
REC-FM
REC5
S-CONT
PB-FM
GND(S)
SW-5S
TO HEAD AMP
Q291 2SA1576-R /SB1218A-R
Q292 2SA1576-R /2SB1218A-R
Q294 2SA1576-R/2SB1218A-R
Q202 2SC4098-P /2SC3936-B
Q205 2SC4098-P /2SC3936-B
Q221
Q222
D201
D205
D206 DAP202U/ MA142WA
D207 DAP202U/ MA142WA
ONLY FOR HS-CX4
AGC
Peaking AMP
MIX
REC SW
V-FF25
V-FF12.5
V-OVL
GND(S)
REC-FM
REC5
REC-C
PB-FM
TL021
TO Y
PB-A-FM
REC-A-FM
TO AUDIO
SW5S
REC-PROT
HA-R/P
V-PROT
V-FF25
A-FF25
V-FF12.5
A-FF12.5
O-FE
O-REC2
HF-REC2
A-OVL
V-OVL
TO CONTROL

CHEMATIC DIAGRAM.

1576-R/2SB1218A-R
4098-P/2SC3936-B
ARE DTA144EU/UN5113
ARE DTC144EU/UN5213

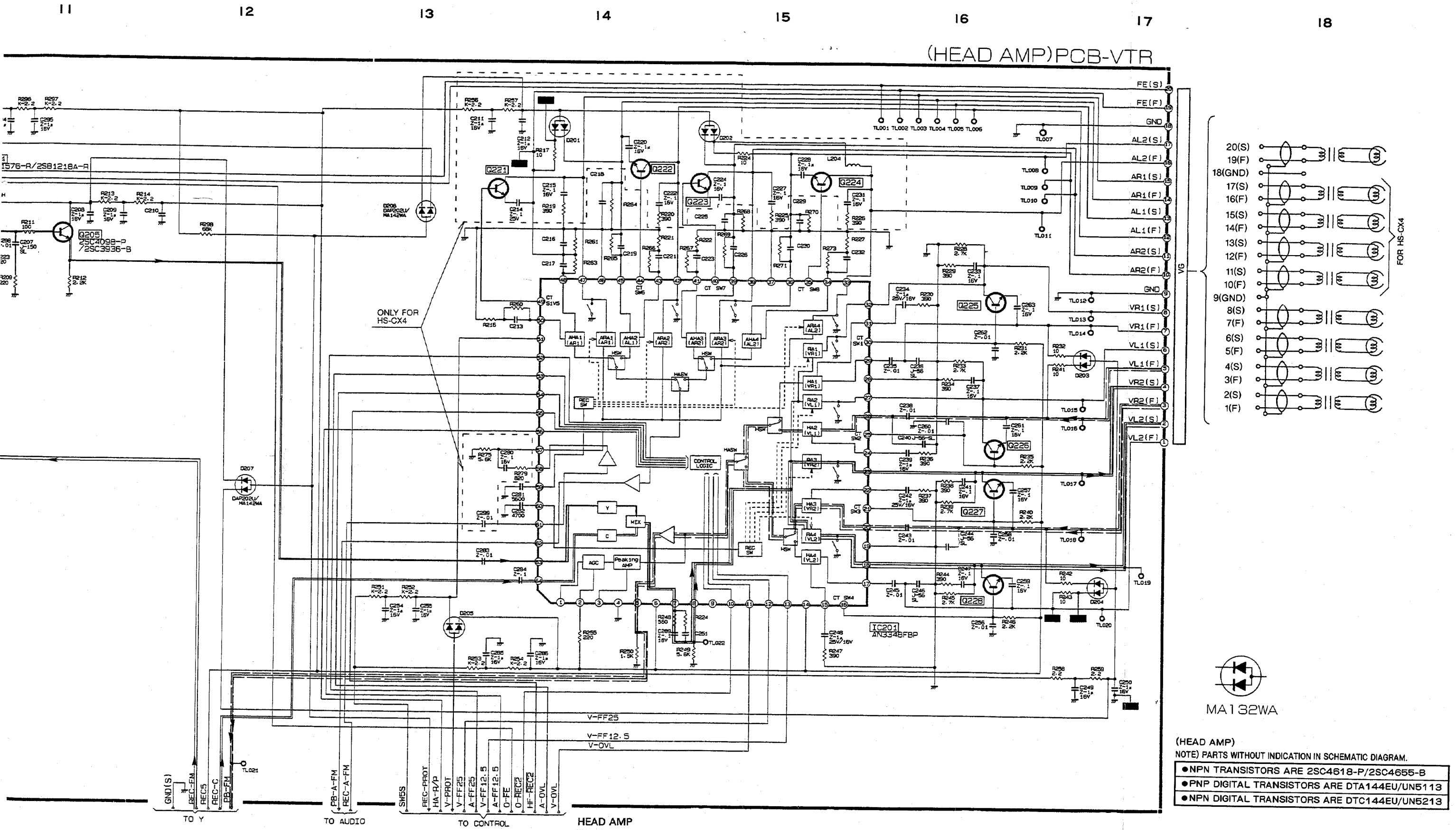

DAP202U
MA142WA


DAN202U
MA142WK

Recording of Luminance Signal
Playback of Luminance Signal
Recording of Color Signal
Playback of Color Signal

HEAD AMP

SYMBOL NO. / MODELS	R20
HS-CX4	×
HS-CX1	1.2


11
12
13
14
15
16
17
18
(HEAD AMP)PCB-VTR
FE(S)
FE(F)
GND
AL2(S)
AL2(F)
AR1(S)
AR1(F)
AL1(S)
AL1(F)
AR2(S)
AR2(F)
GND
VR1(S)
VR1(F)
VL1(S)
VL1(F)
VR2(S)
VR2(F)
VL2(S)
VL2(F)
VG
20(S)
19(F)
18(GND)
17(S)
16(F)
15(S)
14(F)
13(S)
12(F)
11(S)
10(F)
9(GND)
8(S)
7(F)
6(S)
5(F)
4(S)
3(F)
2(S)
1(F)
FOR HS-CX4
ONLY FOR HS-CX4
Q205
2SC4098-P
/2SC3936-B
Q221
Q222
Q223
Q224
Q225
Q226
Q227
Q228
D201
D202
D203
D204
D205
D206
DAP202U/
MA142WA
D207
DAP202U/
MA142WA
IC201
AN3346FBP
CONTROL LOGIC
REC SW
Peaking AMP
AGC
MIX
TL001
TL002
TL003
TL004
TL005
TL006
TL007
TL021
V-FF25
V-FF12.5
V-OVL
GND(S)
REC-FM
REC5
REC-C
PB-FM
PB-A-FM
REC-A-FM
SW5S
REC-PROT
HA-R/P
V-PROT
V-FF25
A-FF25
V-FF12.5
A-FF12.5
O-FE
O-REC2
HF-REC2
A-OVL
V-OVL
TO Y
TO AUDIO
TO CONTROL
MA132WA

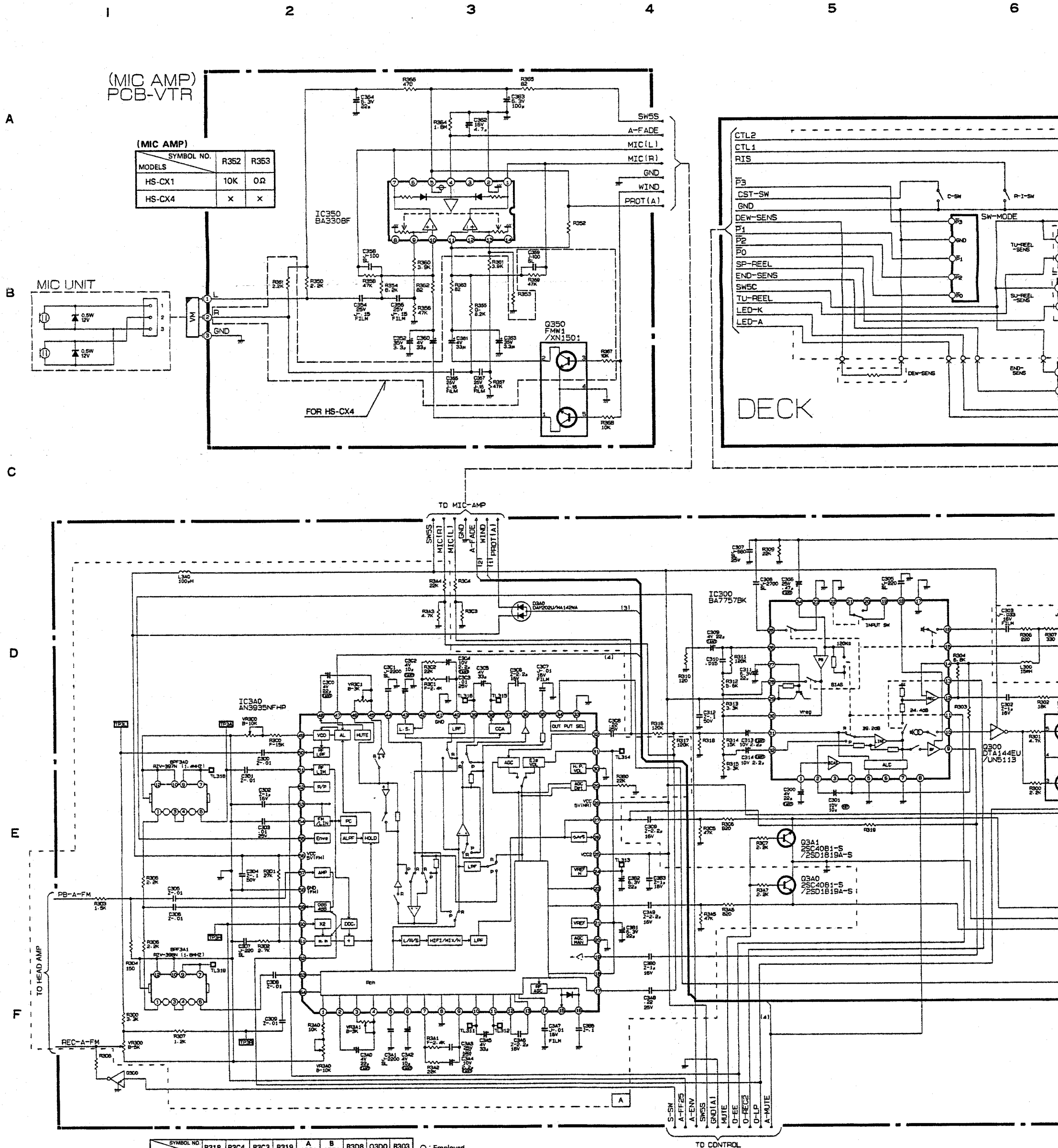
(HEAD AMP)

NOTE) PARTS WITHOUT INDICATION IN SCHEMATIC DIAGRAM.

- ●NPN TRANSISTORS ARE 2SC4618-P/2SC4655-B
- ●PNP DIGITAL TRANSISTORS ARE DTA144EU/UN5113
- ●NPN DIGITAL TRANSISTORS ARE DTC144EU/UN5213

HEAD AMP

MODELS \ SYMBOL NO.	R208	C205	R209	R221 R216	R222	C223 C232 C213 C221	R263 R261 R260 R273	R267 R266 R265 R264	R271 R270 R269 R268	L204	C229 C225	C230 C217 C219 C226	C218	R227
HS-CX4	×	×	390	180	220	Z-1μ	×	×	×	100μH	J-680 SL	Z-.01	560	150
HS-CX1	1.2K	J-33 SL	220	0Ω	0Ω	×	0Ω	0Ω	0Ω	×	×	×	×	0Ω

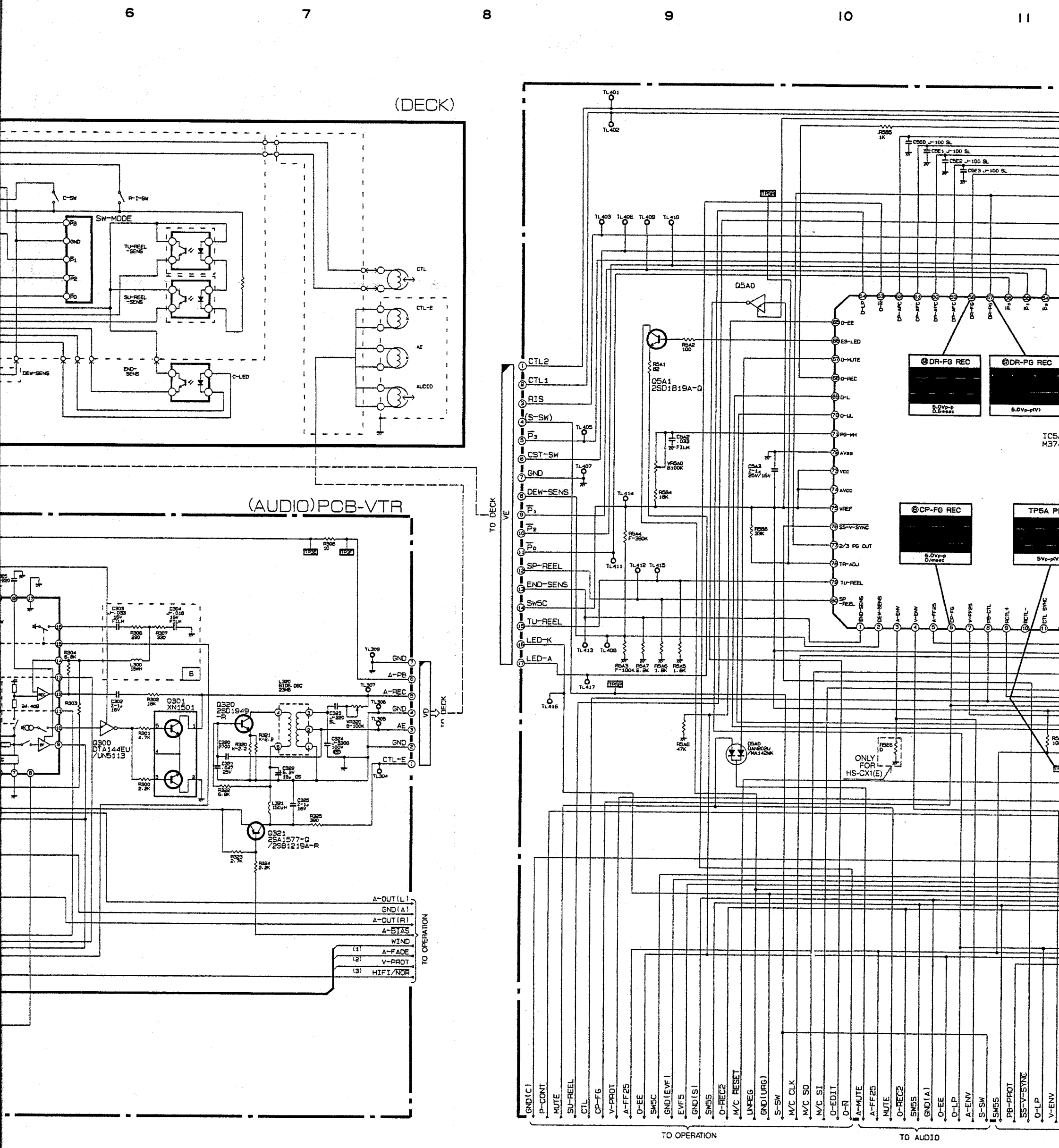

1
2
3
4
5
6
A
B
C
D
E
F
G
(MIC AMP)
PCB-VTR
MIC UNIT
0.5W 12V
VM
L
R
GND
IC350
BA330BF
Q350
FMW1
/XN1501
FOR HS-CX4
SW5S
A-FADE
MIC(L)
MIC(R)
GND
WIND
PROT(A)
CTL2
CTL1
RIS
P3
CST-SW
GND
DEW-SENS
P1
P2
P0
SP-REEL
END-SENS
SW5C
TU-REEL
LED-K
LED-A
C-SW
R-I-SW
SW-MODE
TU-REEL -SENS
SU-REEL -SENS
END-SENS
DEW-SENS
DECK
TO MIC-AMP
IC3A0
AN3935NFHP
IC300
BA7757BK
Q3A0
DAP202U/MA142WA
Q3A1
2SC4081-S
/2SD1819A-S
Q3A0
2SC4081-S
/2SD1819A-S
Q300
DTA144EU
/UN5113
INPUT SW
BIAS
Vreg
ALC
PB-A-FM
REC-A-FM
TO HEAD AMP
TO CONTROL
S-SW
A-FF25
A-ENV
SW5S
GND(A)
MUTE
0-EE
0-REC2
0-LP
A-MUTE
A

(MIC AMP)

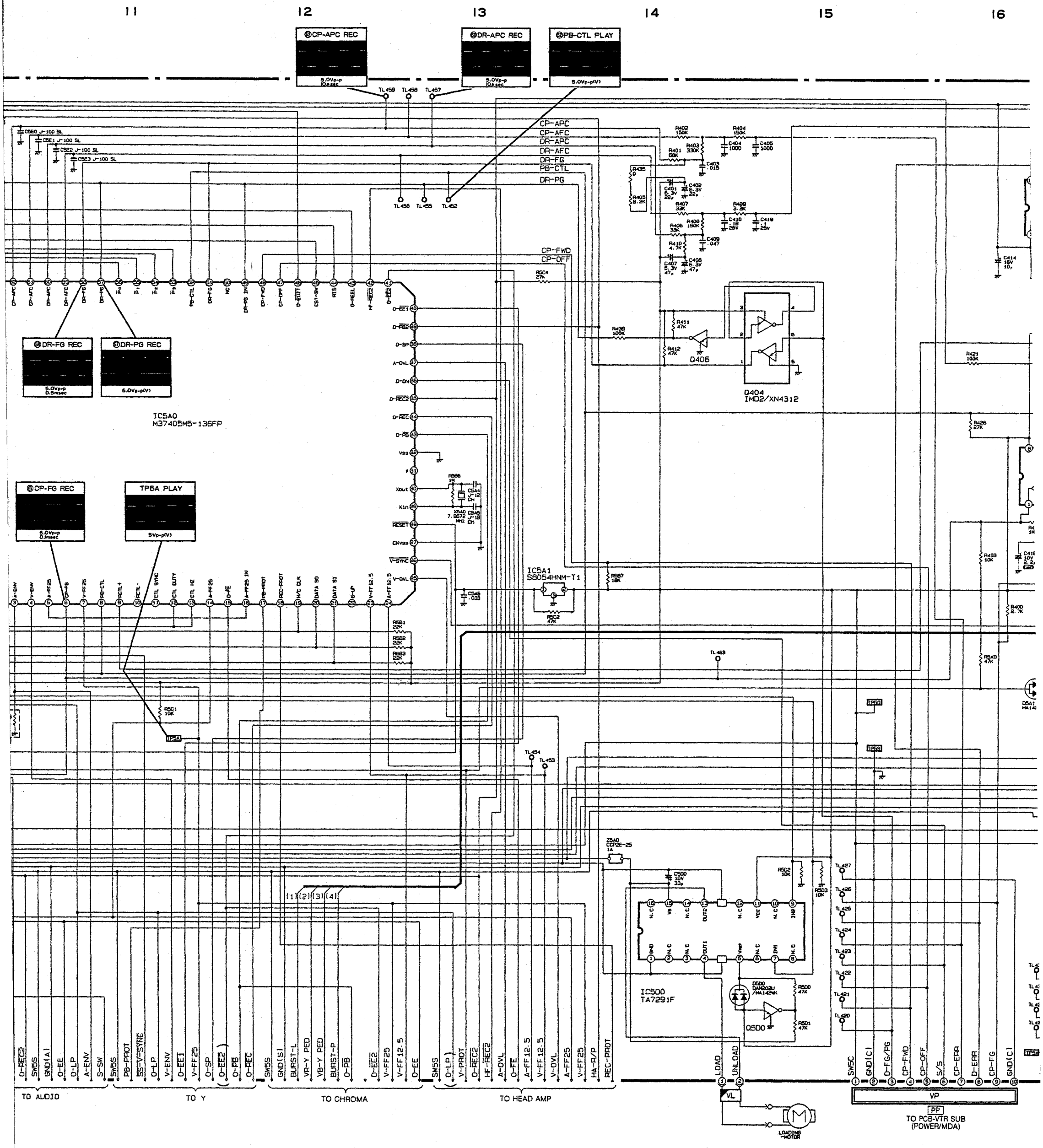
SYMBOL NO. / MODELS	R352	R353
HS-CX1	10K	0Ω
HS-CX4	×	×

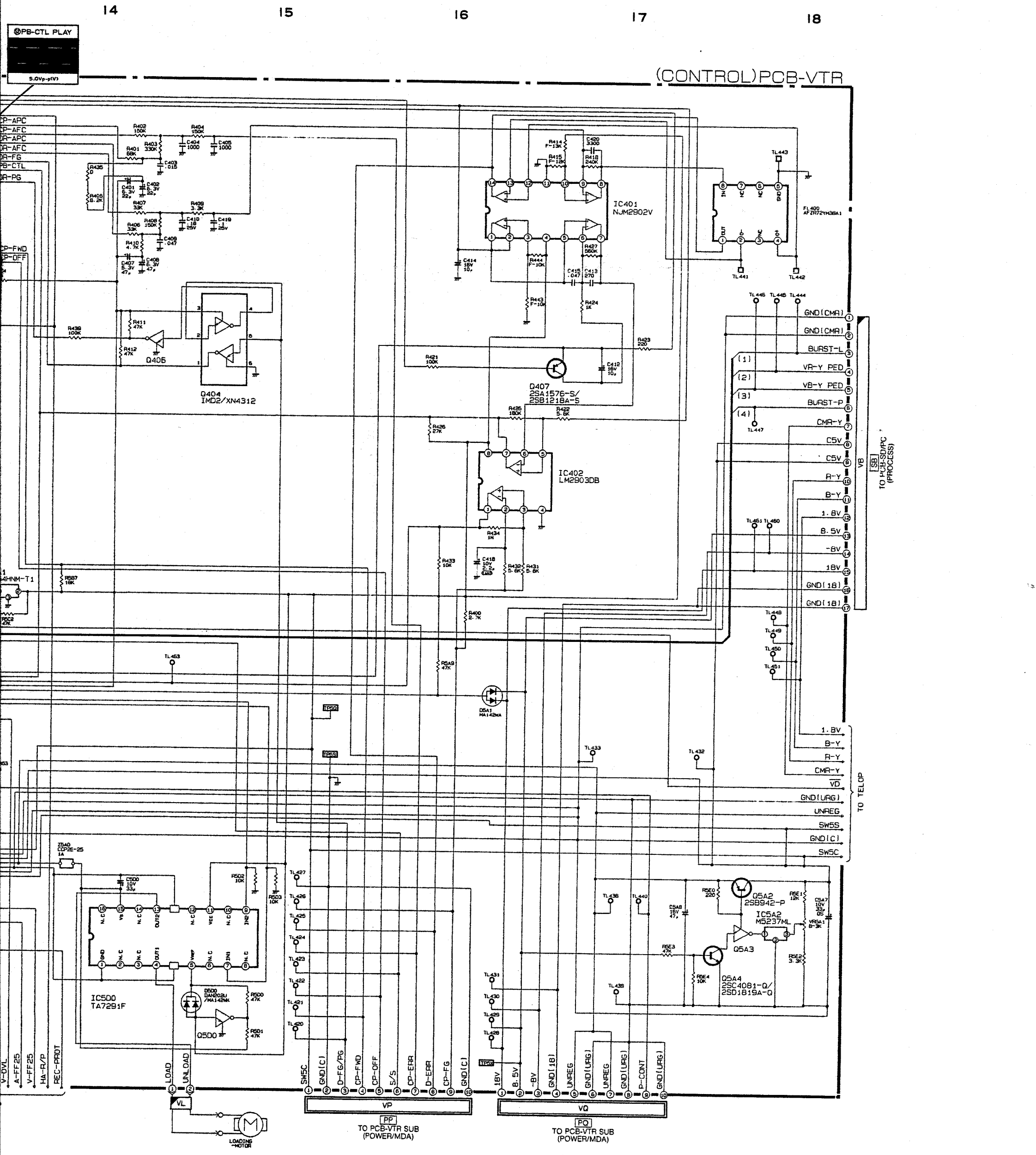
SYMBOL NO. / MODEL	R318	R3C4	R3C3	R319	A AREA	B AREA	R3D8	Q3D0	R303
HS-CX1	1.1K-F	0Ω	×	0Ω	×	○	×	×	470
HS-CX4	3.9K	22K	4.7K	×	○	×	×	×	470

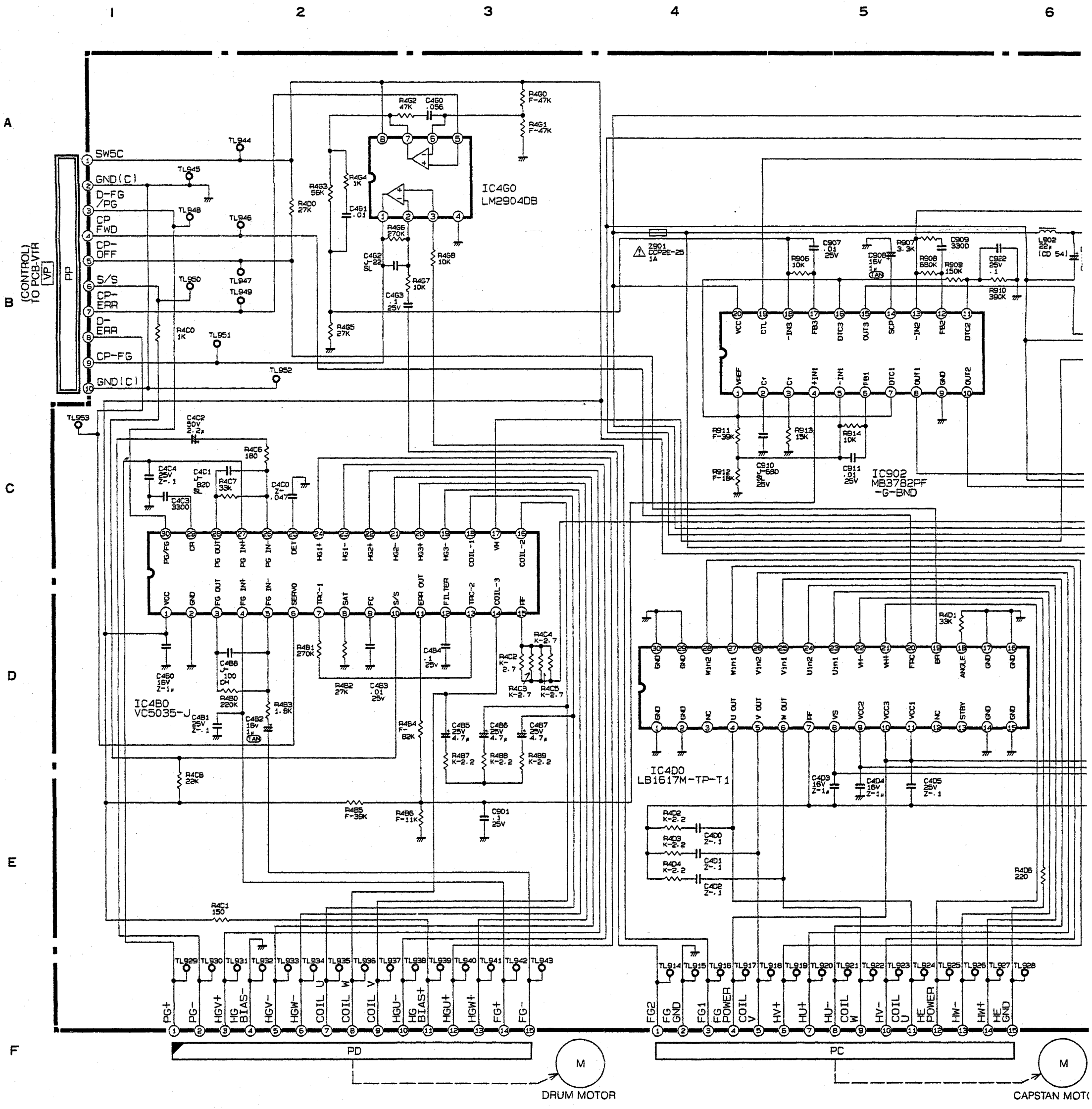
○ : Employed
× : Not employed

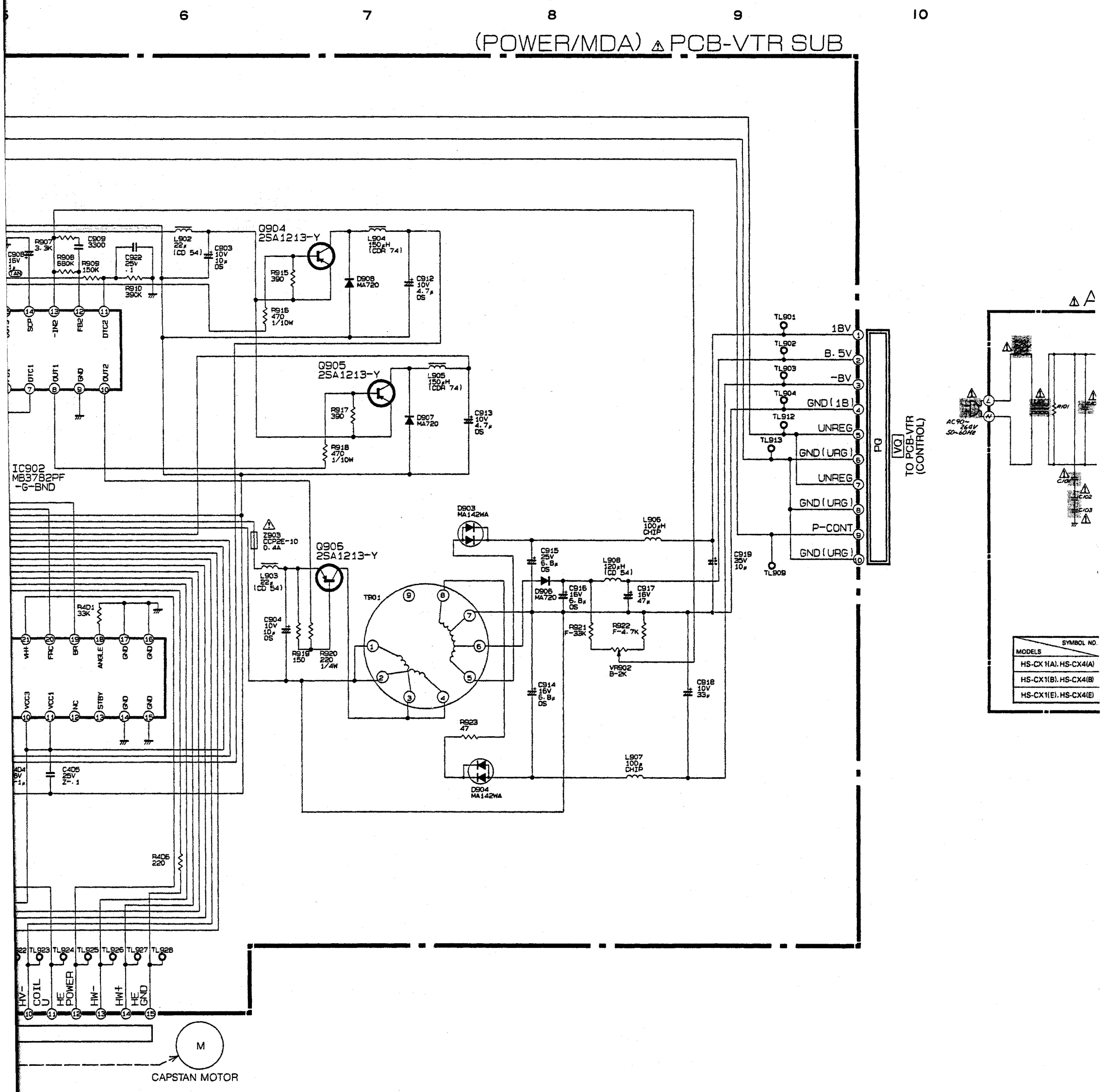


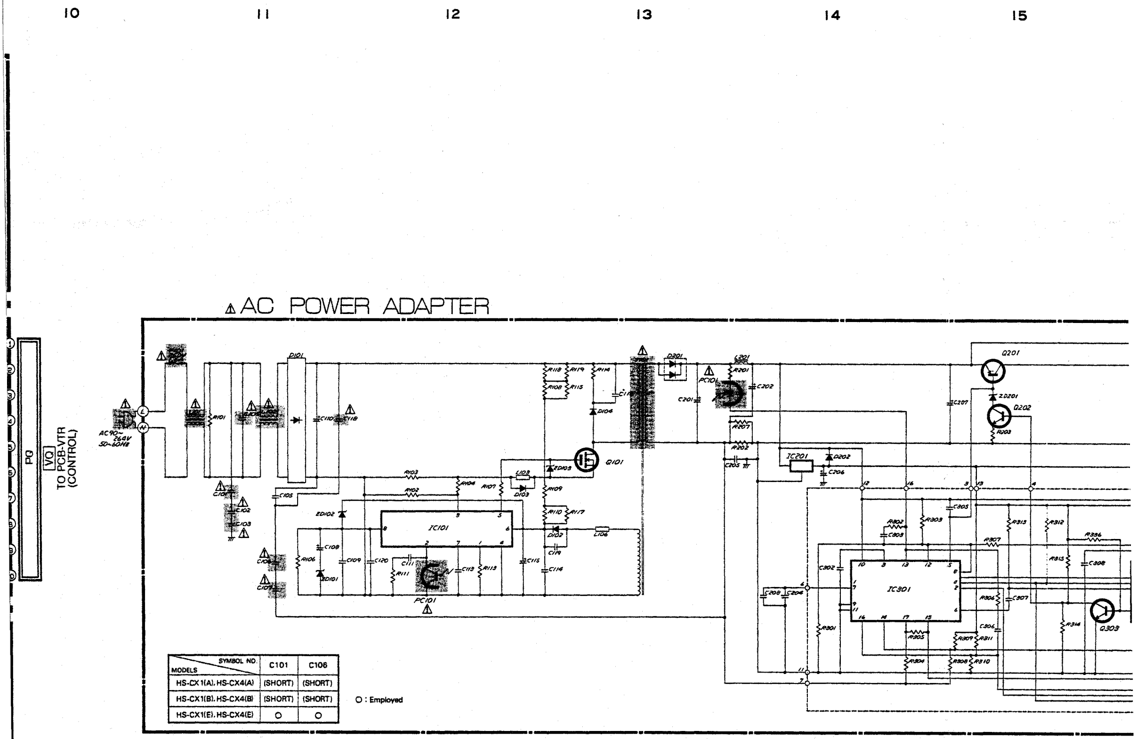
6
7
8
9
10
11
(DECK)
C-SW
R-I-SW
SW-MODE
P3
GND
P1
P2
P0
TU-REEL -SENS
SU-REEL -SENS
DEW-SENS
END-SENS
C-LED
CTL
CTL-E
AE
AUDIO
(AUDIO)PCB-VTR
TO DECK
VE
VD
TO DECK
GND
Δ-PB
A-REC
GND
AE
GND
CTL-E
TL309
TL307
TL306
TL305
TL304
Q301 XN1501
Q300 DTA144EU /UN5113
Q320 2SD1949 -R
Q321 2SA1577-Q /2SB1219A-R
L320 BIOS.OSC
L300 15mH
L321 150μH
R306 10
A-OUT(L)
GND(A)
A-OUT(R)
A-BIAS
WIND
(1) A-FADE
(2) V-PROT
(3) HIFI/NOR
TO OPERATION
TL401
TL402
TL403
TL406
TL409
TL410
TL405
TL407
TL414
TL411
TL412
TL415
TL413
TL408
TL417
TL416
TP5B
TP5D
Q5A0
Q5A1 2SD1819A-Q
R5A2 100
R5A1 82
R585 1K
C5E0 J-100 SL
C5E1 J-100 SL
C5E2 J-100 SL
C5E3 J-100 SL
C5A2 .033 FILM
VR5A0 B100K
C5A3 2.2 25V/16V
R5A4 18K
R5A8 33K
R5A4 F-390K
R5A3 F-100K
R5A7 2.2K
R5A6 1.8K
R5A5 1.8K
R5A6 47K
D5A0 DAN202U /MA142WK
R5E6 0
ONLY FOR HS-CX1(E)
① CTL2
② CTL1
③ RIS
④ (S-SW)
⑤ P3
⑥ CST-SW
⑦ GND
⑧ DEW-SENS
⑨ P1
⑩ P2
⑪ P0
⑫ SP-REEL
⑬ END-SENS
⑭ SW5C
⑮ TU-REEL
⑯ LED-K
⑰ LED-A
O-LP
O-R
DR-APC
CP-AFC
DR-APC
DR-AFC
DR-FG
DR-PG
P0
P1
P2
65 O-EE
66 ES-LED
67 O-MUTE
68 O-REC
69 O-L
70 O-UL
71 PG-MM
72 AVSS
73 VCC
74 AVCC
75 VREF
76 SS-V-SYNC
77 2/3 PG OUT
78 TR-ADJ
79 TU-REEL
80 SP REEL
END-SENS
DEW-SENS
A-ENV
V-ENV
A-FF25
CP-FG
V-FF25
PB-CTL
RCTL+
RCTL-
CTL SYNC
㊿DR-FG REC
5.0Vp-p 0.5msec
(57)DR-PG REC
5.0Vp-p(V)
⑥CP-FG REC
5.0Vp-p 0.1msec
TP5A P
5Vp-p(V)
IC5
M37
GND(C)
P-CONT
MUTE
SU-REEL
CTL
CP-F6
V-PROT
A-FF25
O-EE
SW5C
GND(EVF)
EVF5
GND(S)
SW5S
O-REC2
M/C RESET
UNREG
GND(UNREG)
S-SW
M/C CLK
M/C SO
M/C SI
O-EDIT
O-R
A-MUTE
A-FF25
MUTE
O-REC2
SW5S
GND(A)
O-EE
O-LP
A-ENV
S-SW
SW5S
PB-PROT
SS-V-SYNC
O-LP
V-ENV
TO OPERATION
TO AUDIO


11
12
13
14
15
16
㊷CP-APC REC
5.0Vp-p 10msec
㊵DR-APC REC
5.0Vp-p 10msec
㊸PB-CTL PLAY
5.0Vp-p(V)
TL459
TL458
TL457
TL456
TL455
TL452
CP-APC
CP-AFC
DR-APC
DR-AFC
DR-FG
PB-CTL
DR-PG
CP-FWD
CP-OFF
C5E0 J-100 SL
C5E1 J-100 SL
C5E2 J-100 SL
C5E3 J-100 SL
R402 150K
R404 150K
R401 68K
R403 330K
C404 1000
C405 1000
C403 .015
R435 0
R405 5.2K
C401 6.3V 22μ
C402 6.3V 22μ
R407 33K
R409 3.3K
R408 150K
C410 .18 25V
C419 .1 25V
R406 33K
C409 .047
R410 4.7K
C407 6.3V 47μ
C408 6.3V 47μ
C414 16V 10μ
R5C4 27K
R439 100K
R411 47K
R412 47K
Q406
Q404 IMD2/XN4312
R421 100K
R426 27K
㊺DR-FG REC
5.0Vp-p 0.5msec
㊼DR-PG REC
5.0Vp-p(V)
IC5A0 M37405M5-136FP
CP-APC
CP-AFC
DR-APC
DR-AFC
DR-FG
DR-PG
P0
P1
P2
P3
PB-CTL
DR-FG
NC
DR-PG IN
CP-FWD
CP-OFF
D-EDIT
CST-SW
RTS
D-REEL
HF-REC2
D-EE2
D-EE1
D-PB2
D-SP
A-OVL
D-ON
D-REC2
D-REC
D-PB
Vss
F
Xout
Xin
RESET
CNVss
V-SYNC
V-OVL
R5B6 1M
C5A4 12 CH
X5A0 7.9872 MHz
C5A5 18 CH
C5A6 .033
IC5A1 S8054HNM-T1
R5C2 47K
R5B7 18K
⑥CP-FG REC
5.0Vp-p 0.1msec
TP5A PLAY
5Vp-p(V)
A-ENV
V-ENV
A-FF25
CP-FG
V-FF25
PB-CTL
PCTL+
PCTL-
CTL SYNC
CTL DUTY
CTL H2
A-FF25
D-FE
A-FF25 IN
PB-PROT
REC-PROT
H/C CLK
DATA SO
DATA SI
G-LP
V-FF12.5
A-FF12.5
R5B1 22K
R5B2 22K
R5B3 22K
R5C1 10K
TP5A
TL463
TL454
TL453
TP5Q
TP5S
R4B3 10K
R400 2.7K
R5A9 47K
D5A1
Z5A0 CCP2E-25 1A
C500 10V 33μ
R502 10K
R503 10K
IC500 TA7291F
N.C
Vs
N.C
OUT2
N.C
Vcc
N.C
IN2
GND
N.C
N.C
OUT1
Vref
N.C
IN1
N.C
D500 DAN202U /MA142WK
R500 47K
R501 47K
Q500
TL427
TL426
TL425
TL424
TL423
TL422
TL421
TL420
(1)(2)(3)(4)
O-REC2
SW5S
GND(A)
O-EE
O-LP
A-ENV
S-SW
TO AUDIO
SW5S
PB-PROT
SS-V-SYNC
O-LP
V-ENV
O-EE1
V-FF25
O-SP
(O-EE2)
O-PB
O-REC
TO Y
SW5S
GND(S)
BURST-L
VR-Y PED
VB-Y PED
BURST-P
O-PB
O-EE2
V-FF25
V-FF12.5
O-EE
TO CHROMA
SW5S
(O-LP)
V-PROT
O-REC2
HF-REC2
A-OVL
O-FE
A-FF12.5
V-FF12.5
V-OVL
A-FF25
V-FF25
HA-R/P
REC-PROT
TO HEAD AMP
LOAD
UNLOAD
VL
LOADING -MOTOR
M
SW5C
GND(C)
D-FG/PG
CP-FWD
CP-OFF
S/S
CP-ERR
D-ERR
CP-FG
GND(C)
VP
PP
TO PCB-VTR SUB (POWER/MDA)


14
15
16
17
18
ⓈPB-CTL PLAY
5.0Vp-p(V)
(CONTROL)PCB-VTR
CP-APC
CP-AFC
DR-APC
DR-AFC
DR-FG
PB-CTL
DR-PG
CP-FWD
SP-OFF
IC401
NJM2902V
IC402
LM2903DB
Q404
IMD2/XN4312
Q406
Q407
2SA1576-S/
2SB1218A-S
FL400
TL443
TL441
TL442
TL445
TL446
TL444
TL447
GND(CMA)
BURST-L
VR-Y PED
VB-Y PED
BURST-P
CMR-Y
C5V
R-Y
B-Y
1.8V
8.5V
-8V
18V
GND(18)
SB
VB
TO PCB-SD/PC (PROCESS)
TL451
TL460
TL448
TL449
TL450
TL463
D5A1
MA142WA
TP5Q
TP5S
TL433
TL432
VD
GND(URG)
UNREG
SW5S
GND(C)
SW5C
TO TELOP
Z5A0
CCP2E-25
1A
IC5D0
TA7291F
D500
DAN202U
/MA142WK
Q5D0
Q5A2
2SB942-P
IC5A2
M5237ML
Q5A3
Q5A4
2SC4081-Q/
2SD1819A-Q
V-OVL
A-FF25
V-FF25
HA-R/P
REC-PROT
LOAD
UNLOAD
VL
LOADING-MOTOR
M
D-FG/PG
CP-FWD
CP-OFF
S/S
CP-ERR
D-ERR
CP-FG
18V
GND(18)
P-CONT
VP
PP
TO PCB-VTR SUB (POWER/MDA)
VQ
PQ
TO PCB-VTR SUB (POWER/MDA)


1
2
3
4
5
6
A
B
C
D
E
F
(CONTROL) TO PCB-VTR
VP
PP
SW5C
GND(C)
D-FG /PG
CP FWD
CP-OFF
S/S
CP-ERR
D-ERR
CP-FG
GND(C)
TL944
TL945
TL946
TL947
TL948
TL949
TL950
TL951
TL952
TL953
R4C0 1K
R4D0 27K
R4G0 F-47K
R4G1 F-47K
R4G2 47K
C4G0 .056
R4G3 56K
R4G4 1K
C4G1 .01
R4G5 27K
R4G6 270K
C4G2 SL 22
R4G7 10K
R4G8 10K
C4G3 .1 25V
IC4G0 LM2904DB
Z901 CCP2E-25 1A
C907 .01 25V
R906 10K
C908 16V 1μ TAN
R907 3.3K
C909 3300
R908 680K
R909 150K
C922 25V .1
R910 390K
L902 22μ (CD 54)
VCC
CTL
-IN3
FB3
DTC3
OUT3
SCP
-IN2
FB2
DTC2
VREF
Ct
Ct
+IN1
-IN1
FB1
DTC1
OUT1
GND
OUT2
R911 F-39K
R912 F-18K
R913 15K
R914 10K
C910 SL 680 25V
C911 .01 25V
IC902 MB3782PF -G-BND
C4C2 50V 2.2μ
R4C6 180
C4C4 25V Z-.1
C4C1 820 SL
R4C7 33K
C4C0 Z-.047
C4C3 3300
PG/FG
CR
PG OUT
PG IN+
PG IN-
DET
HG1+
HG1-
HG2+
HG2-
HG3+
HG3-
COIL-1
VM
COIL-2
VCC
GND
FG OUT
FG IN+
FG IN-
SERVO
TRC-1
SAT
FC
S/S
ERR OUT
FILTER
TRC-2
COIL-3
RF
R4B1 270K
C4B4 .1 25V
R4C4 K-2.7
R4C2 K-2.7
R4C3 K-2.7
R4C5 K-2.7
C4B0 16V Z-1μ
C4B6 100 CH
R4B0 220K
R4B3 1.8K
R4B2 27K
C4B3 .01 25V
IC4B0 VC5035-J
C4B1 25V Z-.1
C4B2 16V 1μ TAN
R4B4 F-82K
C4B5 25V 4.7μ
C4B6 25V 4.7μ
C4B7 25V 4.7μ
R4B7 K-2.2
R4B8 K-2.2
R4B9 K-2.2
R4C8 22K
R4B5 F-39K
R4B6 F-11K
C901 .1 25V
R4C1 150
GND
GND
Win2
Win1
Vin2
Vin1
Uin2
Uin1
VH-
VH+
FRC
BR
ANGLE
GND
GND
GND
GND
NC
U OUT
V OUT
W OUT
RF
VS
VCC2
VCC3
VCC1
NC
STBY
GND
GND
R4D1 33K
IC4D0 LB1617M-TP-T1
C4D3 16V Z-1μ
C4D4 16V Z-1μ
C4D5 25V Z-.1
R4D2 K-2.2
C4D0 Z-.1
R4D3 K-2.2
C4D1 Z-.1
R4D4 K-2.2
C4D2 Z-.1
R4D5 220
TL929
TL930
TL931
TL932
TL933
TL934
TL935
TL936
TL937
TL938
TL939
TL940
TL941
TL942
TL943
PG+
PG-
HGV+
HG BIAS-
HGV-
HGW-
COIL U
COIL W
COIL V
HGU-
HG BIAS+
HGU+
HGW+
FG+
FG-
TL914
TL915
TL916
TL917
TL918
TL919
TL920
TL921
TL922
TL923
TL924
TL925
TL926
TL927
TL928
FG2
FG GND
FG1
FG POWER
COIL V
HV+
HU+
HU-
COIL W
HV-
COIL U
HE POWER
HW-
HW+
HE GND
PD
PC
M
DRUM MOTOR
M
CAPSTAN MOT

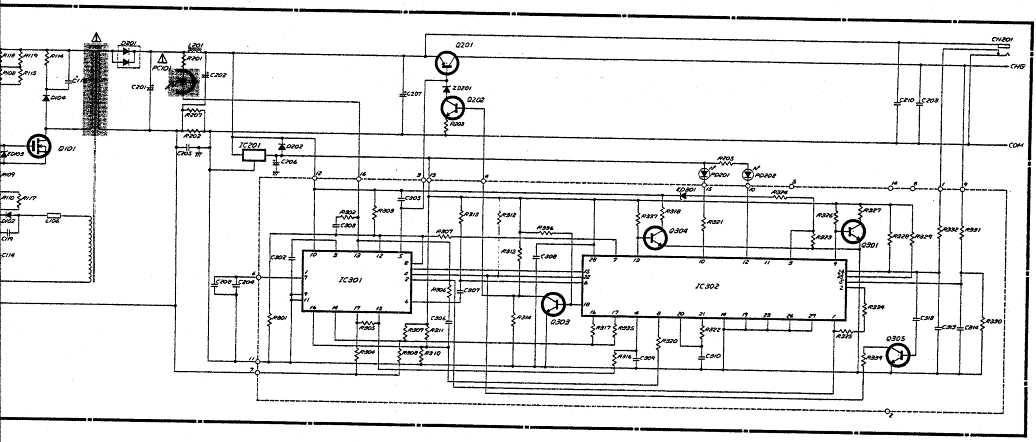
6
7
8
9
10
(POWER/MDA) ⚠ PCB-VTR SUB
Q904
2SA1213-Y
Q905
2SA1213-Y
Q906
2SA1213-Y
R907 3.3K
C909 3300
C908 16V 1μ
R908 680K
R909 150K
C922 25V .1
R910 390K
L902 22μ (CD 54)
C903 10V 10μ OS
L904 150μH (CDR 74)
R915 390
D908 MA720
C912 10V 4.7μ OS
R916 470 1/10W
L905 150μH (CDR 74)
R917 390
D907 MA720
C913 10V 4.7μ OS
R918 470 1/10W
SCP
-IN2
FB2
DTC2
DTC1
OUT1
GND
OUT2
IC902
MB3782PF
-G-BND
⚠
Z903
CCP2E-10
0.4A
L903
22μ
(CD 54)
C904 10V 10μ OS
R919 150
R920 220 1/4W
T901
D903 MA142WA
C915 25V 6.8μ OS
D906 MA720
C916 16V 6.8μ OS
L908 120μH (CD 54)
C917 16V 47μ
R921 F-33K
R922 F-4.7K
VR902 B-2K
L906 100μH CHIP
C919 35V 10μ
C914 16V 6.8μ OS
C918 10V 33μ
R923 47
D904 MA142WA
L907 100μ CHIP
TL901
TL902
TL903
TL904
TL912
TL913
TL909
18V
8.5V
-8V
GND(18)
UNREG
GND(URG)
UNREG
GND(URG)
P-CONT
GND(URG)
PQ
VQ
TO PCB-VTR (CONTROL)
R401 33K
VH+
FRC
BR
ANGLE
GND
GND
VCC3
VCC1
NC
STBY
GND
GND
R404 6V 1μ
C405 25V Z-.1
R406 220
TL922
TL923
TL924
TL925
TL926
TL927
TL928
HV-
COIL U
HE POWER
HW-
HW+
HE GND
M
CAPSTAN MOTOR
⚠
AC90~264V 50-60Hz
R101
C101
C102
C103
SYMBOL NO.
MODELS
HS-CX1(A), HS-CX4(A)
HS-CX1(B), HS-CX4(B)
HS-CX1(E), HS-CX4(E)


10
11
12
13
14
15
△ AC POWER ADAPTER
PG
VQ
TO PCB-VTR (CONTROL)
AC90~264V 50~60Hz
L
N
R101
D101
C110
C118
C104
C102
C103
C105
C106
C107
R118
R119
R114
R108
R115
D104
Q101
ZD105
R103
R102
R104
R107
L103
D103
R109
R110
R117
D102
L106
C119
C114
C115
ZD102
IC101
C108
R106
ZD101
C109
C120
C111
R111
PC101
C112
R113
D201
L201
R201
C201
C202
R207
R202
C205
IC201
D202
C206
C207
Q201
ZD201
Q202
R203
C305
R302
C303
R303
R313
R312
R307
R356
C302
IC301
R315
C308
C209
C204
R306
C307
R301
C306
R305
R309
R311
R314
Q303
R304
R308
R310

MODELS \ SYMBOL NO.	C101	C106
HS-CX1(A), HS-CX4(A)	(SHORT)	(SHORT)
HS-CX1(B), HS-CX4(B)	(SHORT)	(SHORT)
HS-CX1(E), HS-CX4(E)	○	○

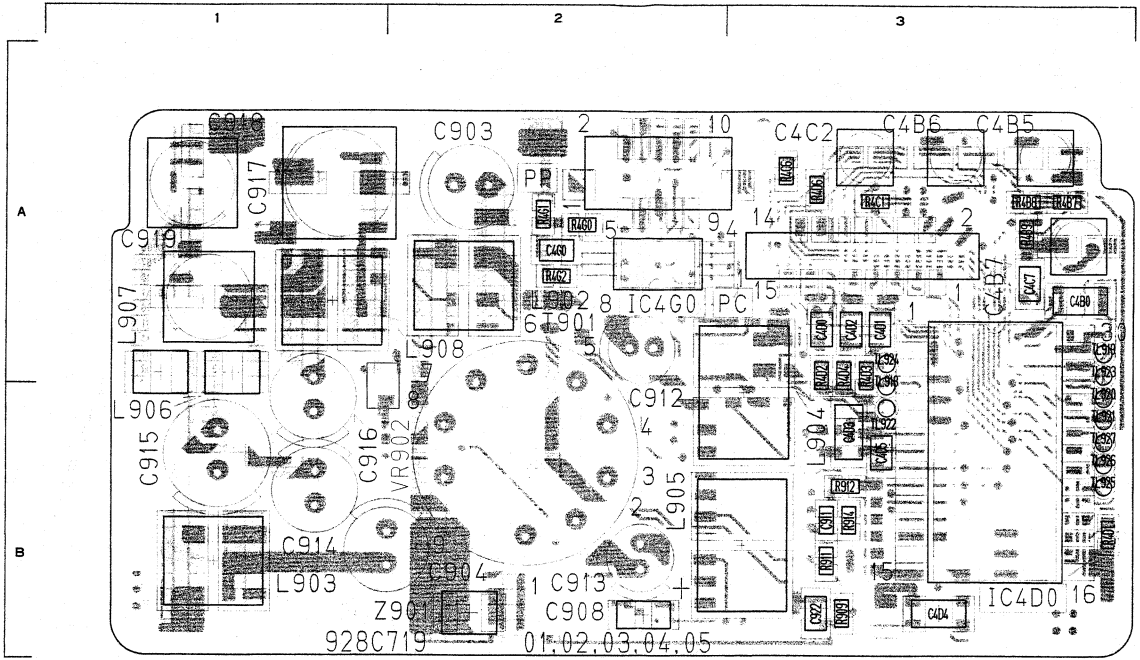
○ : Employed

13 14 15 16 17 18



R118
R119
R114
R108
R115
C11
D104
Q101
ZD103
R109
R110
R117
D102
L106
C119
C114
D201
L201
R201
C202
PC101
C201
R207
R202
C205
IC201
D202
C206
Q201
ZD201
Q202
R203
C207
C210
C203
CN201
CHG
COM
R205
PD201
PD202
ED301
R324
R302
C303
R303
C305
R313
R312
R307
R336
R315
C308
R337
R318
Q304
R321
R326
R327
R323
Q301
R328
R329
R332
R331
C302
IC301
C208
C204
R301
R306
C307
C306
R305
R309
R311
R304
R308
R310
R314
Q303
IC302
R317
R335
R320
R316
C309
R322
C310
R334
R325
R339
Q305
C318
C313
C314
R330

PCB-VTR SUB(A SIDE)

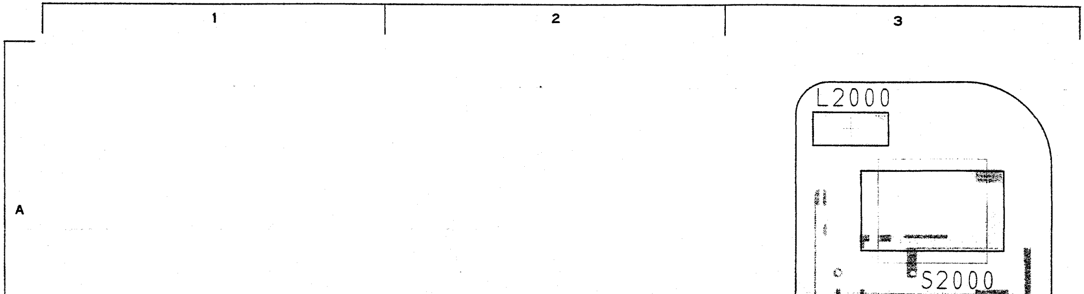

1
2
3
A
B
C918
C903
C917
C919
L907
L906
C915
C916
VR902
C914
L903
Z901
928C719
C904
C913
C908
01,02,03,04,05
L908
L902
T901
C912
L905
IC4G0
R4G1
R4G0
C4G0
R4G2
PR
PC
C4C2
C4B6
C4B5
R4C6
R4D6
R4C1
R4B8
R4B7
R4B9
C4C7
C4B7
C4B0
C4D0
C4D2
C4D1
R4D2
R4D4
R4D3
L904
C4D3
C4D5
R912
C911
R914
R911
C922
R909
C4D4
IC4D0
16
15

PCB – VTR SUB (A SIDE)

SYMBOL NO.	ADDRESS
C4B0	A-3
C4B5	A-3
C4B6	A-3
C4B7	A-3
C4C2	A-3
C4C7	A-3
C4D0	A-3
C4D1	A-3
C4D2	A-3
C4D3	B-3
C4D4	B-3
C4D5	B-3
C4G0	A-2
C903	A-2
C904	B-2
C908	B-2
C911	B-3
C912	B-2
C913	B-2
C914	B-1
C915	B-1
C916	B-1
C917	A-1
C918	A-1
C919	A-1
C922	B-3
IC4D0	B-3
IC4G0	A-2
L902	A-2
L903	B-1
L904	B-3
L905	B-2

SYMBOL NO.	ADDRESS
L906	B-1
L907	A-1
L908	A-2
R4B7	A-3
R4B8	A-3
R4B9	A-3
R4C1	A-3
R4C6	A-3
R4D1	B-3
R4D2	A-3
R4D3	A-3
R4D4	A-3
R4D6	A-3
R4G0	A-2
R4G1	A-2
R4G2	A-2
R909	B-3
R911	B-3
R912	B-3
R914	B-3
T901	A-2
VR902	B-2
Z901	B-2

PCB-REAR(A SIDE)


1
2
3
A
L2000
S2000

PCB – REAR (A SIDE)

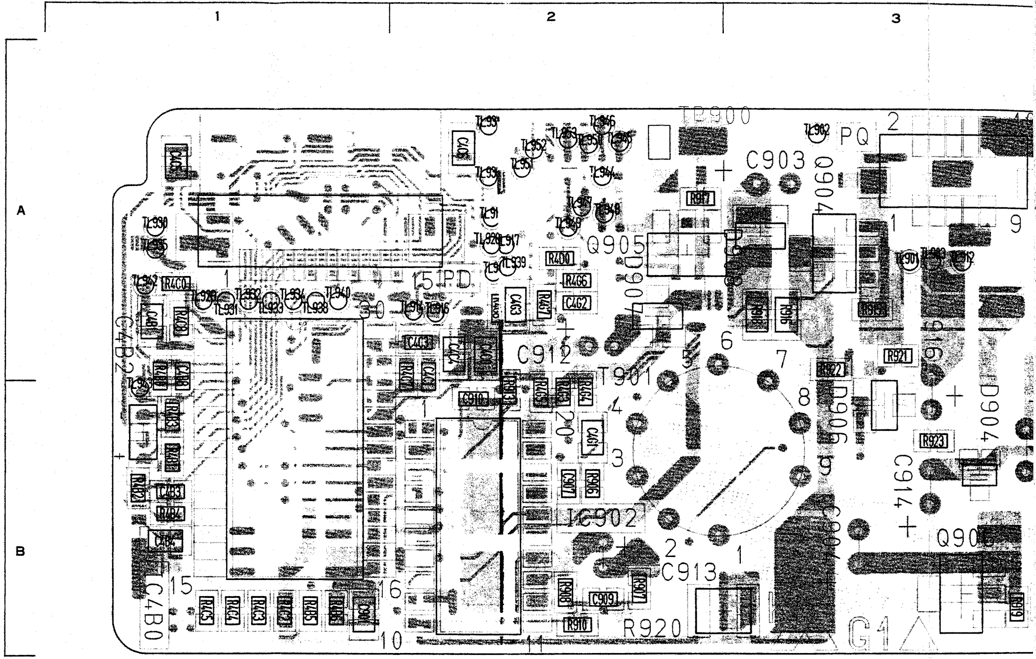
SYMBOL NO.	ADDRESS
C2001	C-2
C2002	C-2
C2005	C-3
C2006	B-3
C2007	C-2
C2009	C-2
C2010	B-3
D2004	C-3
DE2000	C-1
DE2001	C-2
DE2002	C-1
IC2001	C-2
IC2002	C-2

PCB – VTR SUB (A SIDE)

SYMBOL NO.	ADDRESS
C4B0	A-3
C4B5	A-3
C4B6	A-3
C4B7	A-3
C4C2	A-3
C4C7	A-3
C4D0	A-3
C4D1	A-3
C4D2	A-3
C4D3	B-3
C4D4	B-3
C4D5	B-3
C4G0	A-2
C903	A-2
C904	B-2
C908	B-2
C911	B-3
C912	B-2
C913	B-2
C914	B-1
C915	B-1
C916	B-1
C917	A-1
C918	A-1
C919	A-1
C922	B-3
IC4D0	B-3
IC4G0	A-2
L902	A-2
L903	B-1
L904	B-3
L905	B-2

SYMBOL NO.	ADDRESS
L906	B-1
L907	A-1
L908	A-2
R4B7	A-3
R4B8	A-3
R4B9	A-3
R4C1	A-3
R4C6	A-3
R4D1	B-3
R4D2	A-3
R4D3	A-3
R4D4	A-3
R4D6	A-3
R4G0	A-2
R4G1	A-2
R4G2	A-2
R909	B-3
R911	B-3
R912	B-3
R914	B-3
T901	A-2
VR902	B-2
Z901	B-2

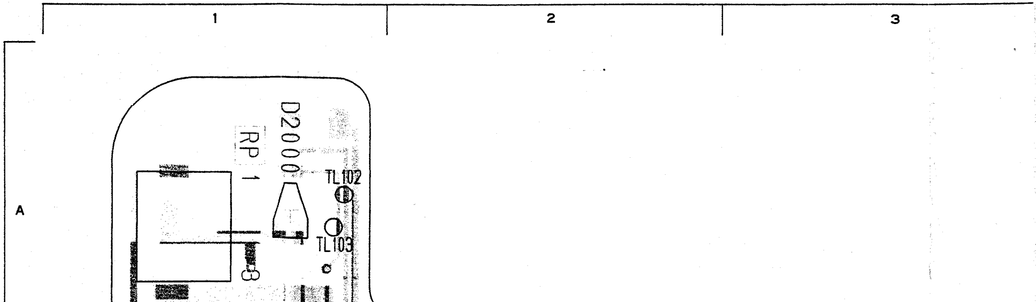
PCB-VTR SUB(B SIDE)


1
2
3
A
B
C903
Q904
Q905
D907
C912
T901
IC902
C913
R920
D906
D904
C914
Q906
C4B2
C4B0
PQ
G1
R917
R921
R922
R923
R910
C909
C910
15PD

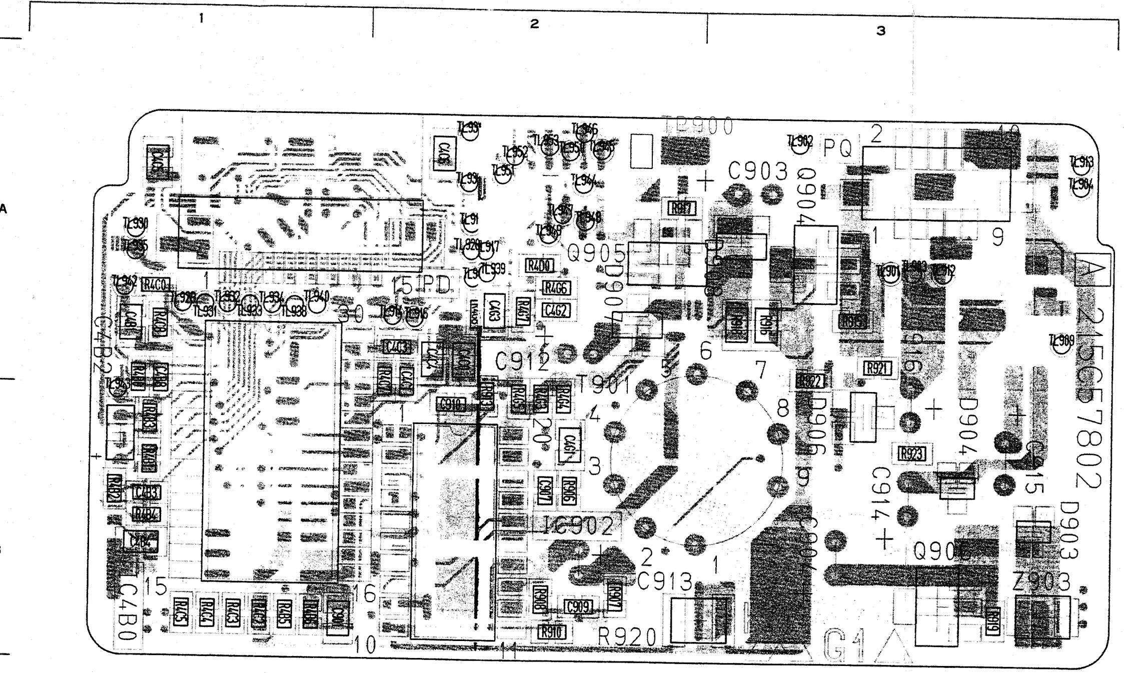
PCB – REAR (A SIDE)

SYMBOL NO.	ADDRESS
C2001	C-2
C2002	C-2
C2005	C-3
C2006	B-3
C2007	C-2
C2009	C-2
C2010	B-3
D2004	C-3
DE2000	C-1
DE2001	C-2
DE2002	C-1
IC2001	C-2
IC2002	C-2
L2000	A-3

PCB-REAR(B SIDE)


1
2
3
A
D2000
RP 1
TL102
TL103

PCB-VTR SUB(B SIDE)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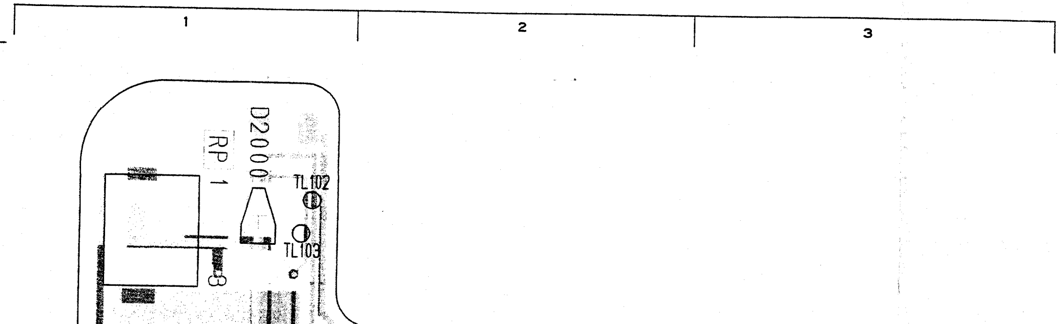
3
A
TP900
PQ
C903
Q904
Q905
D907
C912
T901
IC902
C913
R920
D906
D904
C914
C915
D903
Q906
Z903
C904
C4B0
C4B2
15PD
A 215G57802
G1
R917
R921
R922
R923
R918
R916
R919
R4D0
R4G6
C4G2
C4G3
R4G7
C4G1
C907
R906
R908
C909
R907
R910
C910
C4C3
C4B1
C4B3
R4B4
C4B4
R4B2
R4C5
R4C4
R4C3
R4B5
C4B8
R4C0
C4C5

PCB – VTR SUB (B SIDE)

SYMBOL NO.	ADDRESS
C4B1	A-1
C4B2	A-1
C4B3	B-1
C4B4	B-1
C4B8	A-1
C4C0	A-2
C4C1	A-2
C4C3	A-2
C4C4	A-2
C4C5	A-1
C4C6	A-2
C4G1	B-2
C4G2	A-2
C4G3	A-2
C901	B-1
C903	A-3
C904	B-3
C907	B-2
C909	B-2
C910	B-2
C912	A-2
C913	B-2
C914	B-3
C915	B-3
C916	A-3
D903	B-3
D904	B-3
D906	B-3
D907	A-2
D908	A-3
IC4B0	B-1
IC902	B-2
Q904	A-3
Q905	A-2
Q906	B-3
R4B0	A-1
R4B1	B-1

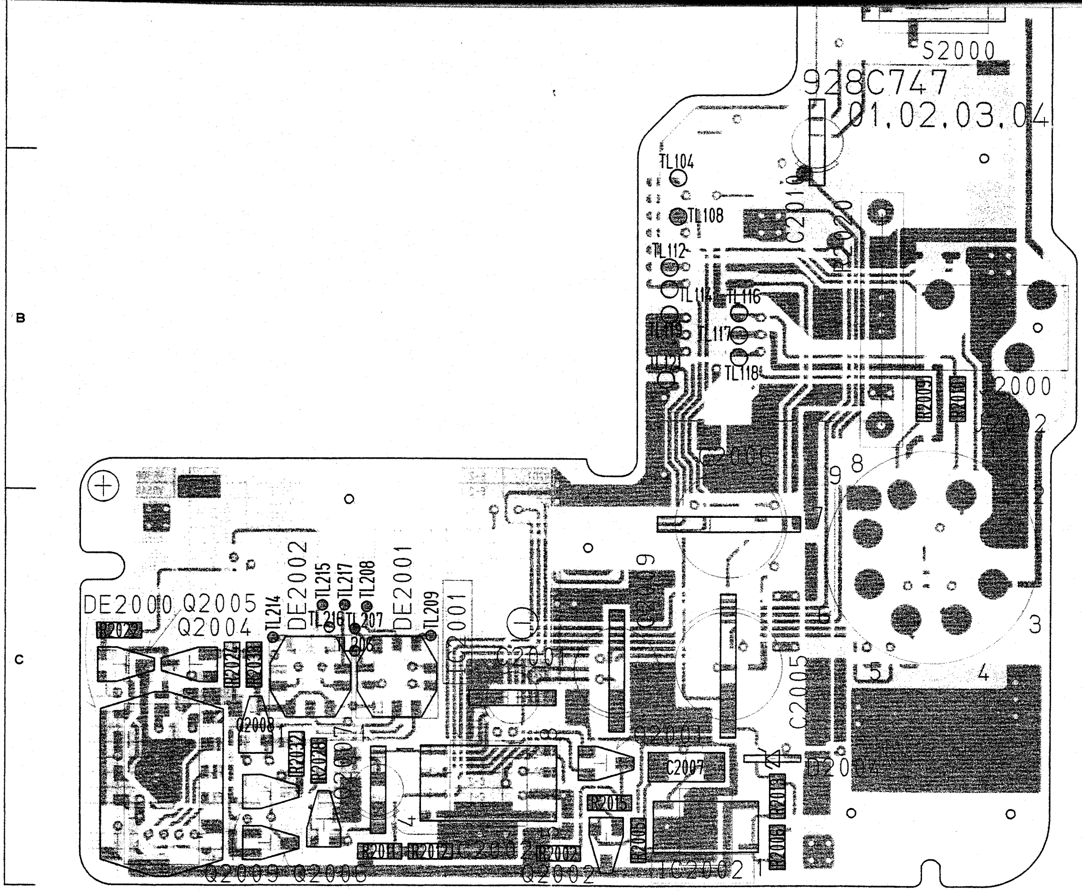
SYMBOL NO.	ADDRESS
R4B2	B-1
R4B3	B-1
R4B4	B-1
R4B5	B-1
R4B6	B-1
R4C0	A-1
R4C2	B-1
R4C3	B-1
R4C4	B-1
R4C5	B-1
R4C7	A-2
R4C8	A-1
R4D0	A-2
R4G3	B-2
R4G4	B-2
R4G5	B-2
R4G6	A-2
R4G7	A-2
R4G8	A-2
R906	B-2
R907	B-2
R908	B-2
R910	B-2
R913	B-2
R915	A-3
R916	A-3
R917	A-2
R918	A-3
R919	B-3
R920	B-2
R921	A-3
R922	A-3
R923	B-3
T901	A-2
TP900	A-2
Z903	B-3

PCB-REAR(B SIDE)


1
2
3
D2000
RP 1
TL102
TL103

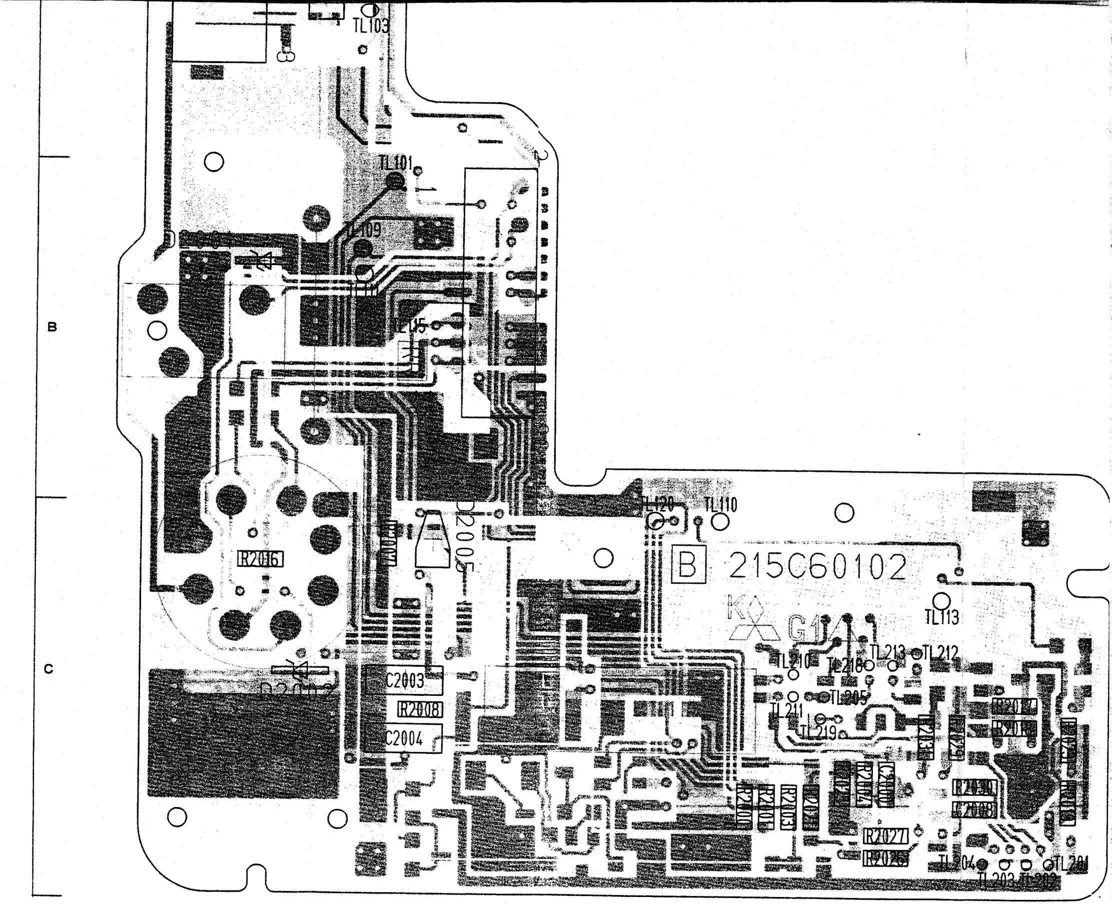
PCB – REAR (B SIDE)

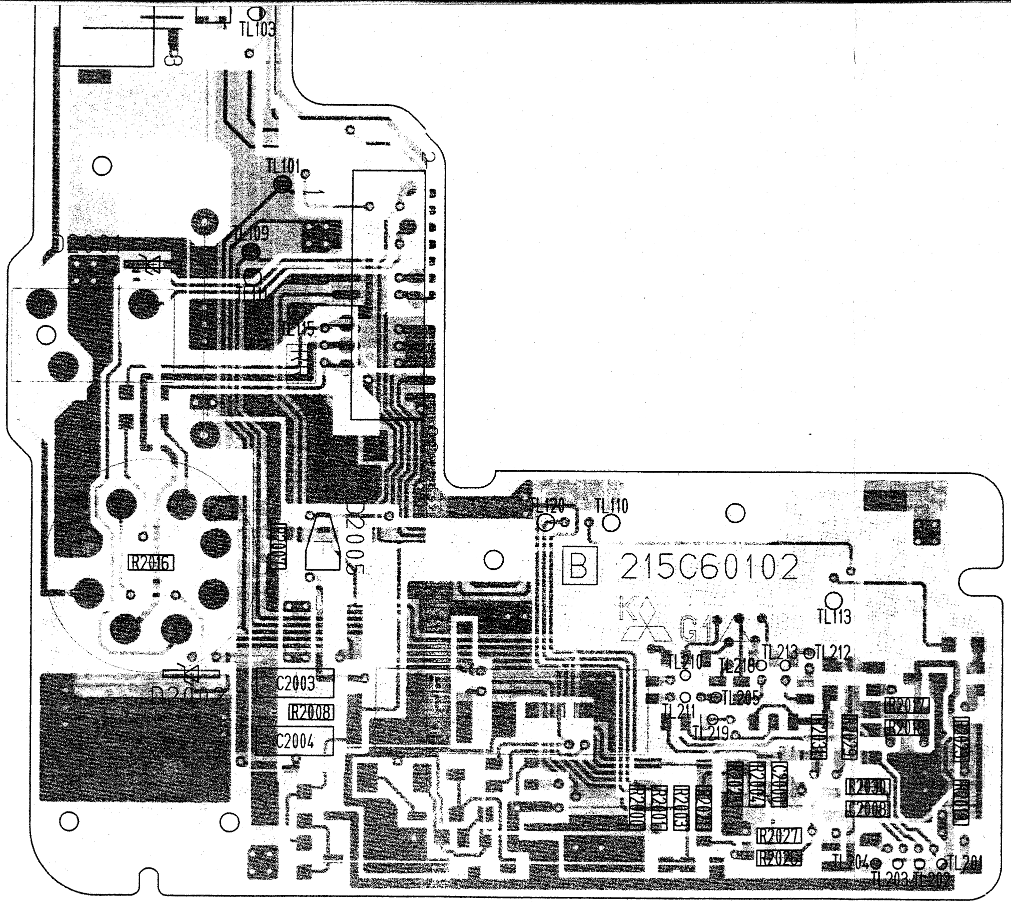
SYMBOL NO.	ADDRESS
C2000	C-3
C2003	C-1
C2004	C-1
C2008	C-3
D2000	A-1
D2001	B-1
D2002	C-1
D2005	C-2
R2000	C-2
R2001	C-3
R2003	C-3
R2004	C-3
R2007	C-1
R2008	C-2
R2016	C-1


B
C
S2000
928C747
01.02.03.04
TL104
TL108
TL112
TL114
TL116
TL117
TL118
TL119
TL121
C2010
C2000
R2009
R2010
L2000
R2020
C2006
9
8
2
3
4
5
6
DE2000
Q2005
Q2004
R2022
R2024
R2033
DE2002
TL214
TL215
TL216
TL217
TL207
TL208
TL206
DE2001
TL209
C2001
C2009
Q2001
C2005
Q2008
R2032
R2028
C2007
D2004
R2015
R2013
R2006
R2005
R2011
R2012
C2002
R2002
Q2009
Q2006
Q2002
IC2002

IC2001	C-2
IC2002	C-2
L2000	A-3
Q2001	C-2
Q2002	C-2
Q2004	C-1
Q2005	C-1
Q2006	C-1
Q2007	C-1
Q2008	C-1
Q2009	C-1
R2002	C-2
R2005	C-2
R2006	C-3
R2009	B-3
R2010	B-3
R2011	C-1
R2012	C-2
R2013	C-3
R2015	C-2
R2020	B-3
R2022	C-1
R2024	C-1
R2028	C-1
R2032	C-1
R2033	C-1
S2000	A-3

1	C-2
2	C-2
	A-3
	C-2
	C-2
	C-1
	C-1
	C-1
	C-1
	C-1
	C-1
	C-2
	C-2
	C-3
	B-3
	B-3
	C-1
	C-2
	C-3
	C-2
	B-3
	C-1
	C-1
	C-1
	C-1
	C-1
	A-3


B
C
TL103
TL101
TL109
TL115
TL120
TL110
R2016
D2005
B 215C60102
G1
TL113
TL210
TL218
TL213
TL212
TL205
TL211
TL219
C2003
R2008
C2004
D2002
R2027
R2025
R2003
TL204
TL203
TL202
TL201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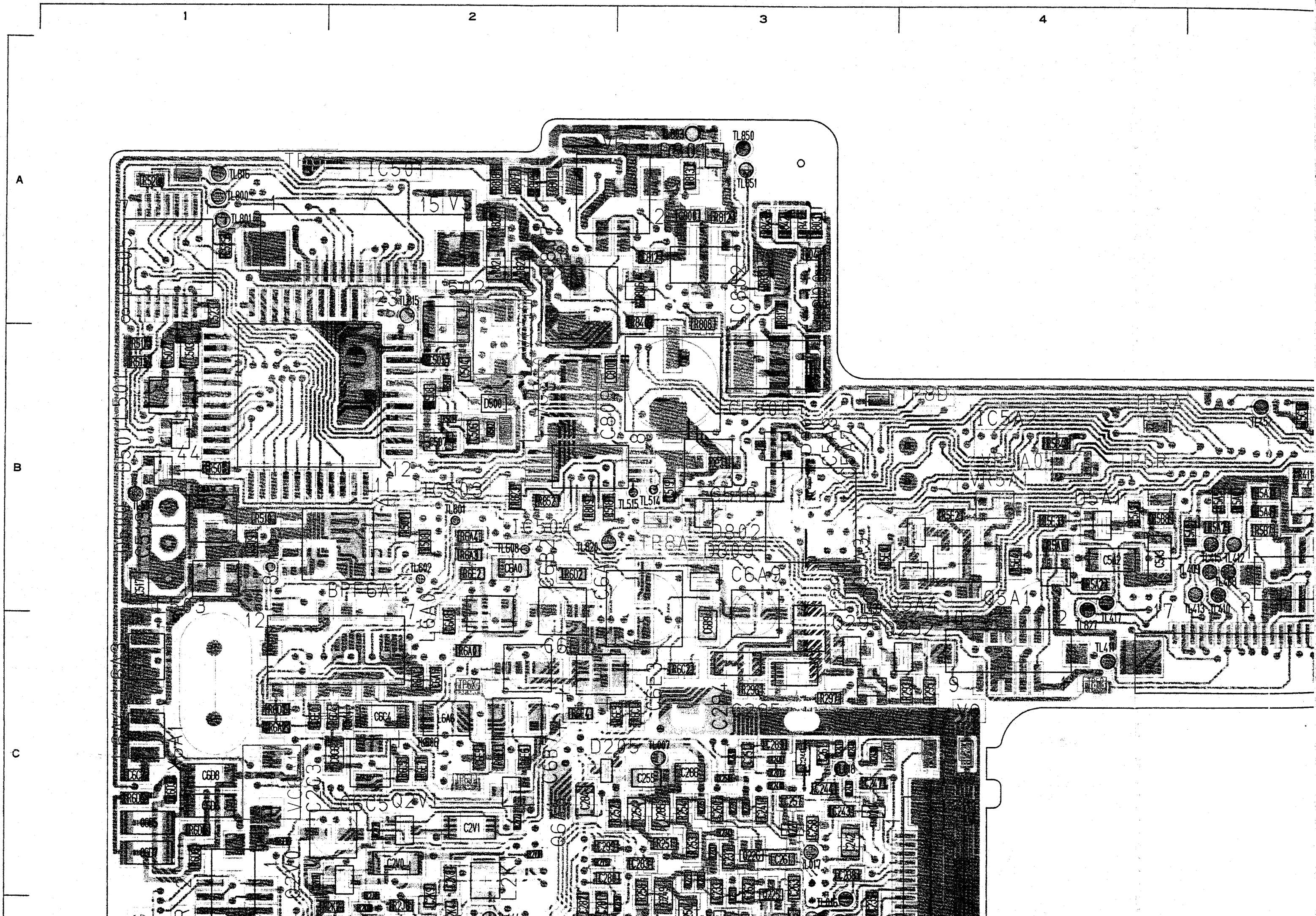
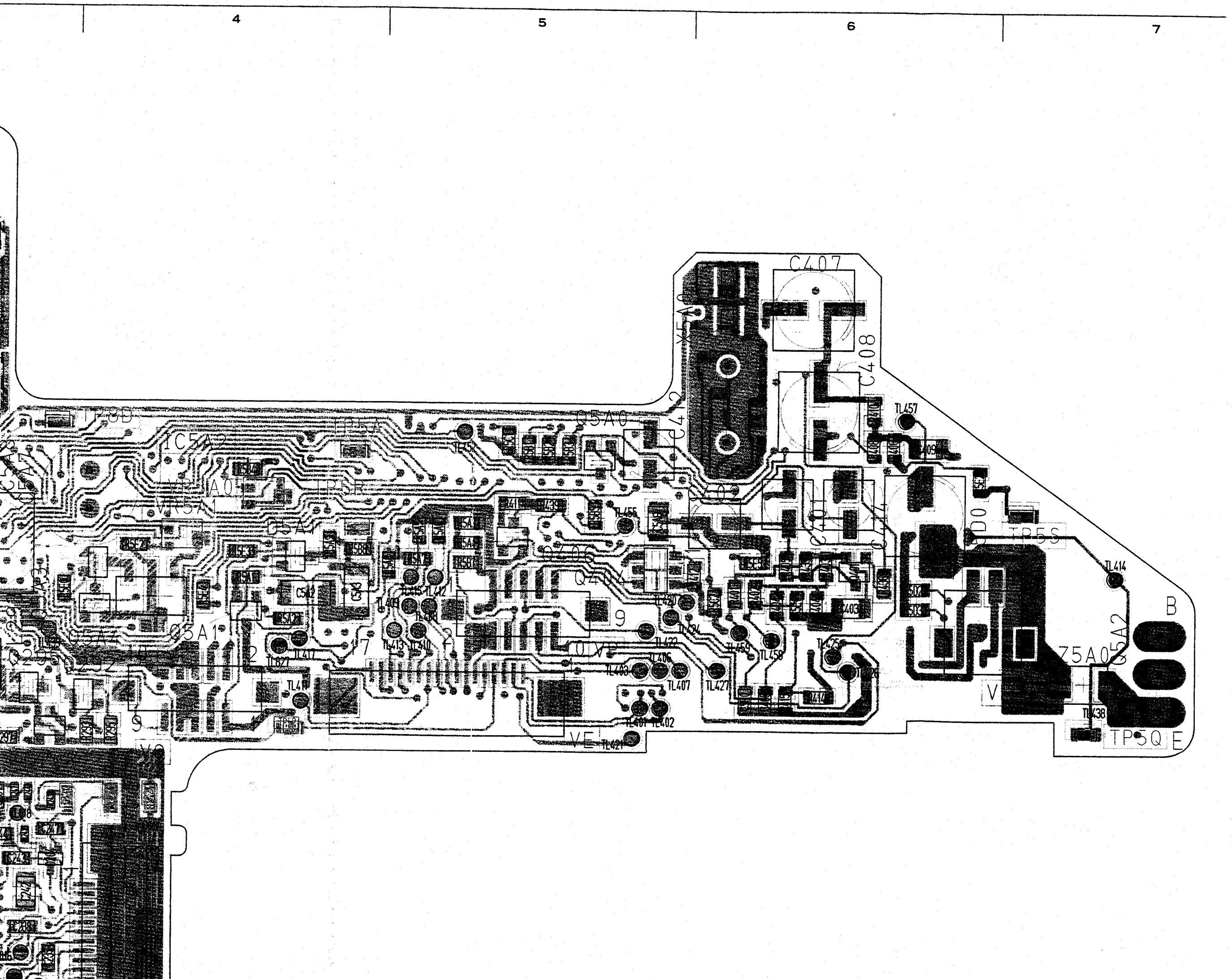
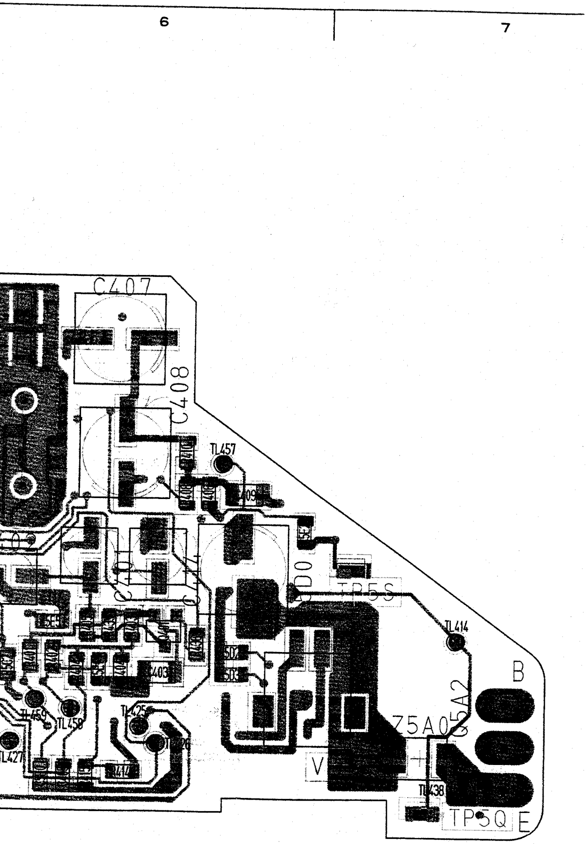
TL101
TL109
TL115
D2005
R2016
C2003
R2008
C2004
D2002
B
215C60102
TL120
TL110
TL113
TL213
TL212
TL210
TL218
TL205
TL211
TL219
R2017
R2018
R2030
C2008
R2027
R2026
TL204
TL203
TL202
TL201

R2001	C-3
R2003	C-3
R2004	C-3
R2007	C-1
R2008	C-2
R2016	C-1
R2017	C-3
R2018	C-3
R2019	C-3
R2021	C-3
R2023	C-3
R2025	C-3
R2026	C-3
R2027	C-3
R2029	C-3
R2030	C-3
R2031	C-3

PCB-VTR(A SIDE)


1
2
3
4
A
B
C
IC501
15V
TL850
TL851
TL816
TL800
TL801
TL815
L502
IC803
IC800
R608
C810
C809
D500
C507
R508
R852
TL801
IC503
IC504
TL515
TL514
TL820
TP8A
D802
D809
C6A9
BPF6A1
C6A0
R6A0
R6A1
R6A4
R6C2
R6E2
R602
TL608
TL602
TP6X
C6D8
C6C4
L6A6
Q6C5
Q2V1
C2V1
C2V0
C263
D205
TL607
C255
C288
R251
C283
C261
C257
TL617
TL616
C247
C244
C243
IC5A2
VR5A01
VR5A1
D5A1
TP5A
TP5R
TP8D
R5E2
R5E3
R5A1
R5A2
C5A2
R5B0
R5B8
Q5A1
Q5A4
TL409
TL405
TL408
TL412
TL413
TL410
TL417
TL627
TL4
R296
R297
Q29
R510
R511
R509
R519
R520


4
5
6
7
C407
X5A0
C408
C412
Q5A0
TL457
IC5A2
VR5A0
VR5A1
TP5A
TP5R
TP5S
Q406
Q404
Q5A1
Q5A4
TL455
TL414
TL420
TL422
TL409
TL415
TL412
TL413
TL410
TL417
TL627
TL403
TL406
TL407
TL427
TL459
TL458
TL425
TL401
TL402
TL421
TL438
C403
9
2
17
10
VP
VE
V
B
E
Z5A0
Q5A2
TP5Q
C5D0



PCB – VTR (A SIDE)

SYMBOL NO.	ADDRESS
BPF3A0	E-4
BPF3A1	E-3
BPF6A1	B-2
C204	E-3
C211	D-3
C212	D-3
C215	D-3
C218	D-2
C220	D-2
C221	D-2
C222	D-3
C224	D-3
C225	D-3
C226	D-3
C227	D-3
C228	D-3
C229	D-3
C230	D-3
C233	C-3
C235	D-3
C236	D-3
C237	C-3
C238	C-3
C241	C-3
C242	C-3
C243	C-3
C244	C-3
C247	C-3
C248	C-3
C249	C-3
C250	D-3
C251	C-3
C254	C-3
C255	C-3
C257	C-3
C258	C-3
C260	C-3
C261	C-3
C262	C-3
C263	C-3
C267	C-3
C275	E-3
C278	D-3
C280	C-2
C281	D-2
C282	D-2
C283	C-3
C284	C-2
C285	C-3
C286	C-3
C289	C-3
C294	C-3
C295	C-3
C298	D-3
C299	C-2
C2A2	D-2
C2A3	D-2
C2A4	E-2
C2A7	D-2

SYMBOL NO.	ADDRESS
C2A8	E-2
C2A9	E-2
C2B0	E-2
C2B5	E-2
C2B6	E-1
C2B7	D-1
C2B8	E-1
C2B9	E-2
C2C0	E-2
C2C1	D-1
C2C2	D-1
C2C3	C-1
C2C5	D-2
C2C7	E-2
C2C9	E-2
C2E0	E-2
C2E1	D-2
C2F5	E-3
C2H0	E-3
C2H3	E-3
C2J2	D-2
C2J3	D-2
C2J4	D-2
C2K2	D-2
C2K3	D-2
C2K4	D-2
C2K5	D-2
C2K6	D-2
C2K7	D-2
C2K8	C-2
C2K9	C-2
C2P4	E-1
C2P5	E-1
C2P6	E-1
C2V0	C-2
C2V1	C-2
C301	E-6
C310	E-6
C311	E-6
C312	E-6
C313	E-5
C314	E-6
C320	E-6
C321	E-6
C322	E-6
C323	E-6
C324	E-6
C352	E-5
C353	E-5
C360	E-5
C361	E-5
C362	E-5
C363	E-5
C364	E-5
C3A0	E-4
C3A2	E-4
C3A4	E-4
C3A5	E-5
C3A6	E-5
C3B1	E-4

SYMBOL NO.	ADDRESS
C3B2	E-4
C3C0	E-4
C3C2	E-4
C3C4	E-4
C3C5	E-4
C3C6	E-4
C3D0	E-3
C401	B-6
C402	B-6
C403	B-6
C404	B-6
C405	C-6
C407	A-6
C408	B-6
C409	B-6
C412	B-5
C414	B-6
C502	B-1
C503	B-1
C504	B-2
C505	B-2
C506	B-2
C507	B-2
C508	B-2
C513	B-1
C517	B-1
C518	B-3
C519	B-3
C523	A-1
C525	A-1
C5A2	B-4
C5A3	B-4
C5A6	B-5
C5A7	B-3
C5A8	B-3
C5D0	B-6
C5E0	C-6
C5E1	B-6
C5E2	B-6
C6A0	B-2
C6A1	C-2
C6A2	B-2
C6A7	B-2
C6A8	C-2
C6A9	B-3
C6B1	C-2
C6B2	B-2
C6B7	C-2
C6B9	C-3
C6C4	C-2
C6C5	C-2
C6C6	C-2
C6C7	C-1
C6D5	C-1
C6D6	C-1
C6D7	C-1
C6D8	C-1
C6E0	C-1
C6E3	C-3
C6E5	C-2

SYMBOL NO.	ADDRESS
C800	A-3
C801	A-2
C803	A-3
C804	A-3
C807	A-2
C809	B-2
C810	B-2
C812	A-3
CF800	B-3
D201	D-2
D202	D-3
D204	C-3
D205	C-2
D206	C-3
D207	D-3
D208	D-3
D2A1	E-2
D500	B-2
D501	B-1
D5A1	B-4
D801	A-3
D802	B-3
D806	A-3
D807	B-3
D809	B-3
IC501	A-2
IC503	B-2
IC504	B-2
IC505	A-1
IC5A2	B-4
IC802	A-3
L202	E-3
L203	E-3
L204	D-3
L293	B-3
L2A5	E-2
L2F3	E-3
L2H0	E-3
L2H1	E-3
L2K1	C-2
L300	E-6
L320	E-6
L501	B-1
L502	A-2
L503	B-1
L6A0	C-2
L6A0	C-2
L6A3	C-1
L6A4	C-1
L6A6	C-2
Q200	D-3
Q202	D-3
Q203	D-3
Q222	D-3
Q223	D-3

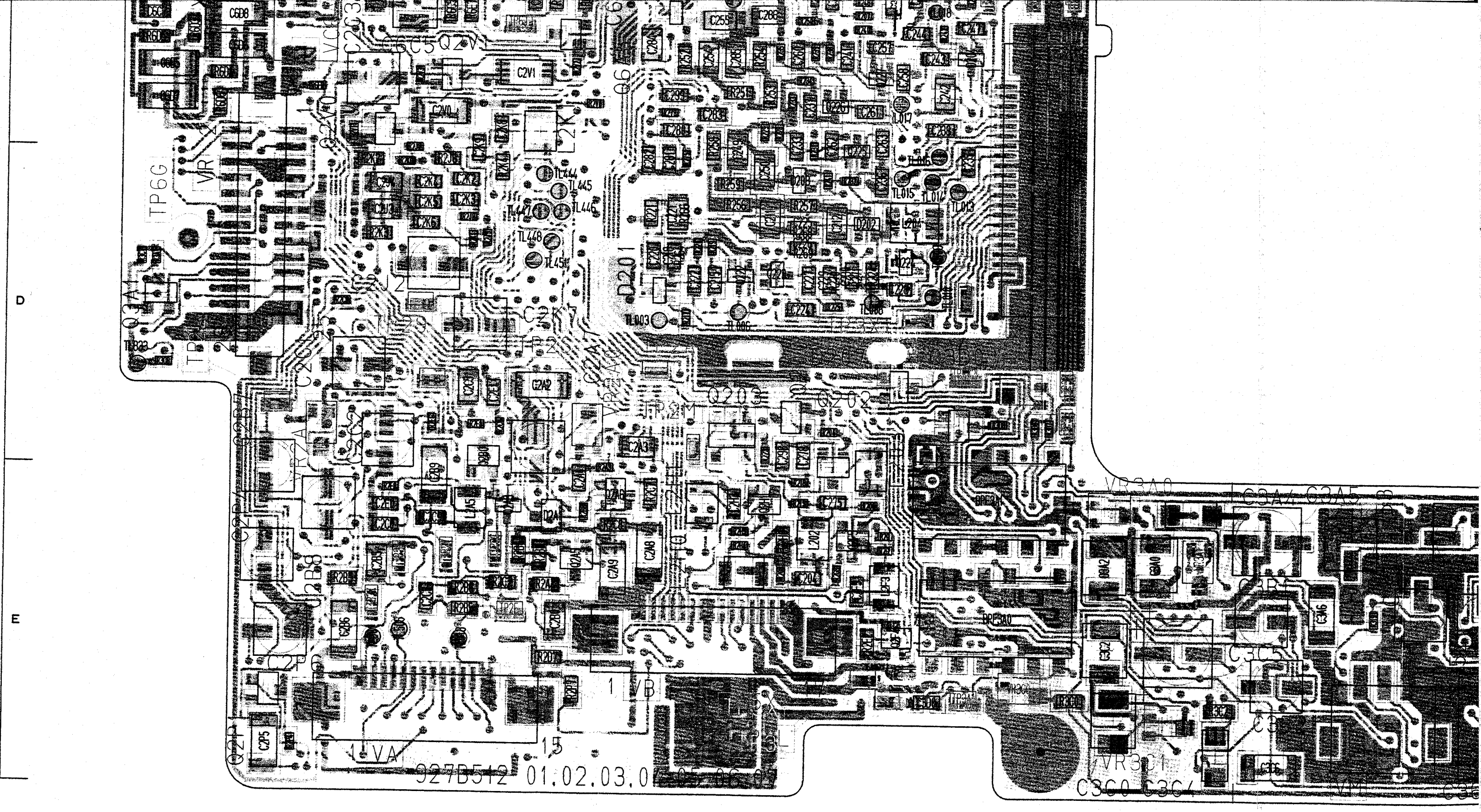
SYMBOL NO.	ADDRESS
Q224	D-3
Q225	D-3
Q226	C-3
Q227	C-3
Q292	C-4
Q295	C-3
Q2A5	E-2
Q2A6	E-2
Q2A8	E-2
Q2B0	D-2
Q2F4	E-3
Q2F5	E-3
Q2H1	E-3
Q2P1	E-1
Q2V0	C-1
Q2V1	C-2
Q3A1	D-1
Q3D0	D-3
Q401	B-6
Q404	B-5
Q406	B-5
Q500	B-1
Q5A0	B-5
Q5A1	B-4
Q5A2	B-7
Q5A3	B-3
Q5A4	B-4
Q6A5	C-2
R204	D-3
R206	E-3
R207	C-3
R208	E-3
R215	E-3
R217	D-3
R218	E-3
R219	D-3
R220	D-3
R221	D-2
R223	D-3
R224	D-3
R225	D-3
R228	C-3
R229	C-3
R231	D-3
R232	D-3
R233	C-3
R234	C-3
R235	C-3
R238	C-3
R239	C-3
R240	C-3
R241	D-3
R242	C-3
R243	C-3
R244	C-3
R247	C-3
R248	C-3
R249	C-3
R250	C-3

SYMBOL NO.	ADDRESS
R251	C-3
R252	C-2
R253	C-3
R254	C-3
R256	D-3

SYMBOL NO.	ADDRESS
R315	E-6
R318	E-6
R319	E-5
R325	E-6
R352	E-5

SYMBOL NO.	ADDRESS
R5E0	B-3
R5E2	B-3
R5E3	B-4
R5E4	B-4
R5E5	B-6

SYMBOL NO.	ADDRESS
TP3E	E-6
TP3F	E-6
TP3H	D-4
TP3L	E-3
TP3R	D-4


D
E
TP6G
VR
Q3A1
TL028
C6D8
C2V1
C2V0
Q2V1
L2K
TL444
TL445
TL446
TL447
TL448
TL451
C2K7
JP2S
Q6
D201
TL003
TL006
C255
C286
C263
C259
TL015
TL013
TL017
D202
Q2A
VR2A0
JP2M
Q203
Q202
C2A3
C2A9
C2A8
D2A1
L2A5
C2A2
Q2A5
R2B8
C2P6
C2P5
Q2P1
1 VA
15
1 VB
TP2E
R207
C204
L202
VR3A0
C3A4
C3A5
C3B4
C3C5
VR3C1
C3C0
C3C4
C3C2
BPF3A0
C3A6
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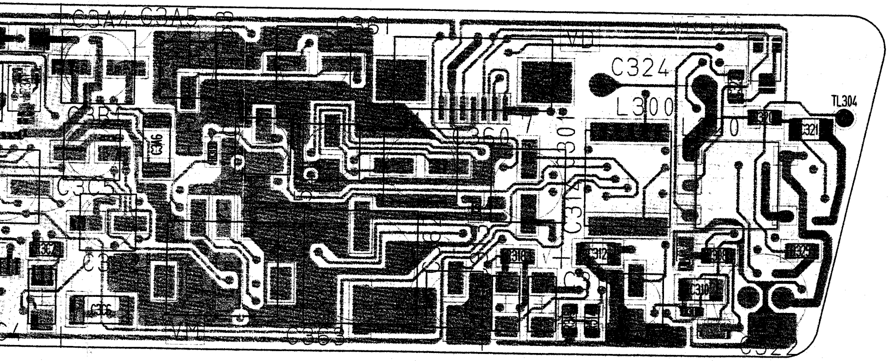
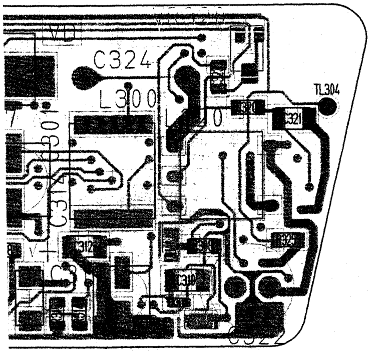


SYMBOL NO.	ADDRESS
R251	C-3
R252	C-2
R253	C-3
R254	C-3
R256	D-3
R257	D-3
R258	C-3
R259	D-3
R264	D-2
R266	D-2
R268	D-3
R269	D-3
R270	D-3
R271	D-3
R275	D-3
R279	C-2
R293	C-4
R295	C-4
R296	C-3
R297	C-3
R2A3	E-2
R2A4	E-2
R2B3	E-2
R2B4	E-2
R2B5	E-2
R2B6	E-2
R2B8	E-2
R2B9	E-1
R2C2	E-2
R2C3	D-1
R2C7	E-2
R2C8	E-2
R2C9	D-2
R2D7	E-2
R2E0	E-2
R2E1	D-2
R2E2	E-3
R2E6	D-2
R2G1	E-3
R2G2	E-3
R2G3	E-3
R2H4	E-3
R2H5	E-3
R2J6	D-2
R2J8	D-2
R2J9	D-2
R2K0	D-2
R2K1	D-2
R2K2	D-2
R2K3	D-2
R2K4	D-2
R2P4	E-1
R2P7	E-2
R2V0	C-2
R2V1	C-1
R2V2	C-2
R2V3	C-2
R308	E-6
R311	E-6
R314	E-6

SYMBOL NO.	ADDRE
R315	E-6
R318	E-6
R319	E-5
R325	E-6
R352	E-5
R3A7	D-1
R3C0	E-4
R3C2	E-4
R3C6	D-1
R3C7	D-1
R3D0	D-4
R3D7	D-4
R3D8	D-4
R401	B-6
R402	B-6
R403	B-6
R404	B-6
R405	B-6
R406	B-6
R408	B-6
R410	B-6
R411	B-5
R412	B-6
R414	C-6
R415	C-6
R435	B-6
R436	B-6
R439	B-5
R500	B-2
R501	B-2
R502	B-2
R505	B-1
R507	B-2
R508	B-2
R509	B-1
R510	B-1
R511	B-1
R513	B-1
R518	B-2
R528	A-1
R5A1	B-4
R5A2	B-4
R5A3	B-5
R5A4	B-5
R5A5	B-5
R5A6	B-5
R5A7	B-5
R5A8	B-5
R5A9	B-4
R5B1	B-5
R5B2	B-5
R5B3	B-5
R5B4	B-4
R5B5	B-5
R5B7	B-5
R5B8	B-4
R5C1	B-5
R5C2	B-6
R5D2	B-6
R5D3	B-6



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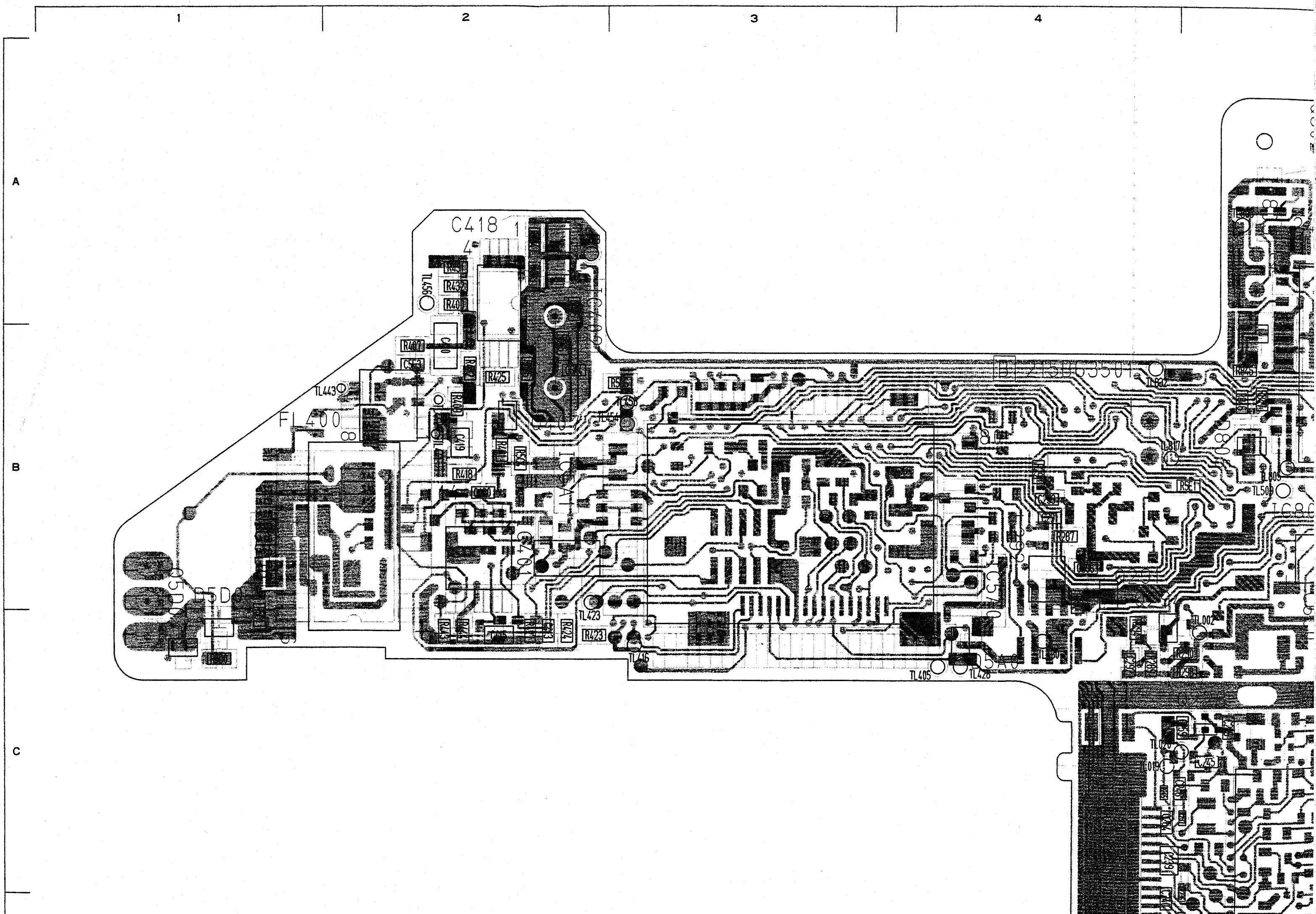
R253	C-3
R254	C-3
R256	D-3
R257	D-3
R258	C-3
R259	D-3
R264	D-2
R266	D-2
R268	D-3
R269	D-3
R270	D-3
R271	D-3
R275	D-3
R279	C-2
R293	C-4
R295	C-4
R296	C-3
R297	C-3
R2A3	E-2
R2A4	E-2
R2B3	E-2
R2B4	E-2
R2B5	E-2
R2B6	E-2
R2B8	E-2
R2B9	E-1
R2C2	E-2
R2C3	D-1
R2C7	E-2
R2C8	E-2
R2C9	D-2
R2D7	E-2
R2E0	E-2
R2E1	D-2
R2E2	E-3
R2E6	D-2
R2G1	E-3
R2G2	E-3
R2G3	E-3
R2H4	E-3
R2H5	E-3
R2J6	D-2
R2J8	D-2
R2J9	D-2
R2K0	D-2
R2K1	D-2
R2K2	D-2
R2K3	D-2
R2K4	D-2
R2P4	E-1
R2P7	E-2
R2V0	C-2
R2V1	C-1
R2V2	C-2
R2V3	C-2
R308	E-6
R311	E-6
R314	E-6

SYMBOL NO.	ADDRESS
R315	E-6
R318	E-6
R319	E-5
R325	E-6
R352	E-5
R3A7	D-1
R3C0	E-4
R3C2	E-4
R3C6	D-1
R3C7	D-1
R3D0	D-4
R3D7	D-4
R3D8	D-4
R401	B-6
R402	B-6
R403	B-6
R404	B-6
R405	B-6
R406	B-6
R408	B-6
R410	B-6
R411	B-5
R412	B-6
R414	C-6
R415	C-6
R435	B-6
R436	B-6
R439	B-5
R500	B-2
R501	B-2
R502	B-2
R505	B-1
R507	B-2
R508	B-2
R509	B-1
R510	B-1
R511	B-1
R513	B-1
R518	B-2
R528	A-1
R5A1	B-4
R5A2	B-4
R5A3	B-5
R5A4	B-5
R5A5	B-5
R5A6	B-5
R5A7	B-5
R5A8	B-5
R5A9	B-4
R5B1	B-5
R5B2	B-5
R5B3	B-5
R5B4	B-4
R5B5	B-5
R5B7	B-5
R5B8	B-4
R5C1	B-5
R5C2	B-6
R5D2	B-6
R5D3	B-6

SYMBOL NO.	ADDRESS
R5E0	B-3
R5E2	B-3
R5E3	B-4
R5E4	B-4
R5E5	B-6
R6A0	C-2
R6A1	C-2
R6A2	C-1
R6A3	B-2
R6A4	B-2
R6C1	C-3
R6C2	C-3
R6C4	C-2
R6C5	C-2
R6D2	B-3
R6D3	C-1
R6D4	C-1
R6D5	C-1
R6D6	C-1
R6D7	C-1
R6E1	C-2
R6E4	C-2
R6E5	C-2
R6E6	C-2
R6E7	C-2
R6F2	C-1
R6J7	C-2
R807	A-2
R808	A-3
R809	B-2
R810	A-2
R812	A-3
R813	A-3
R817	A-3
R818	A-2
R820	A-2
R821	A-2
R822	A-2
R823	B-2
R833	A-3
R840	A-3
R841	A-3
R842	A-3
R843	A-3
R852	B-2
TP25	E-1
TP29	D-2
TP2A	D-2
TP2C	E-2
TP2E	E-2
TP2K	E-1
TP2L	D-1
TP2M	D-2
TP2S	D-2
TP2V	E-2
TP2X1	C-3
TP2X2	C-4
TP2Y	C-4
TP3A	E-3

SYMBOL NO.	ADDRESS
TP3E	E-6
TP3F	E-6
TP3H	D-4
TP3L	E-3
TP3R	D-4
TP3X1	D-3
TP3X2	D-3
TP3Y	D-3
TP500	B-2
TP5A	B-4
TP5P	C-4
TP5Q	C-7
TP5R	B-4
TP5S	B-7
TP5X	E-3
TP6G	D-1
TP6J	C-2
TP6X	C-2
TP8A	B-3
TP8D	B-4
TP8E	A-1
VC500	B-2
VC6A1	C-1
VC800	B-2
VR2A0	D-2
VR2A1	D-1
VR320	E-6
VR3A0	E-4
VR3A1	E-4
VR3C0	E-4
VR3C1	E-4
VR3D0	D-4
VR5A0	B-4
VR5A1	B-4
X5A0	A-5
X6A1	C-1
X800	A-3
Z5A0	B-7

PCB-VTR(B SIDE)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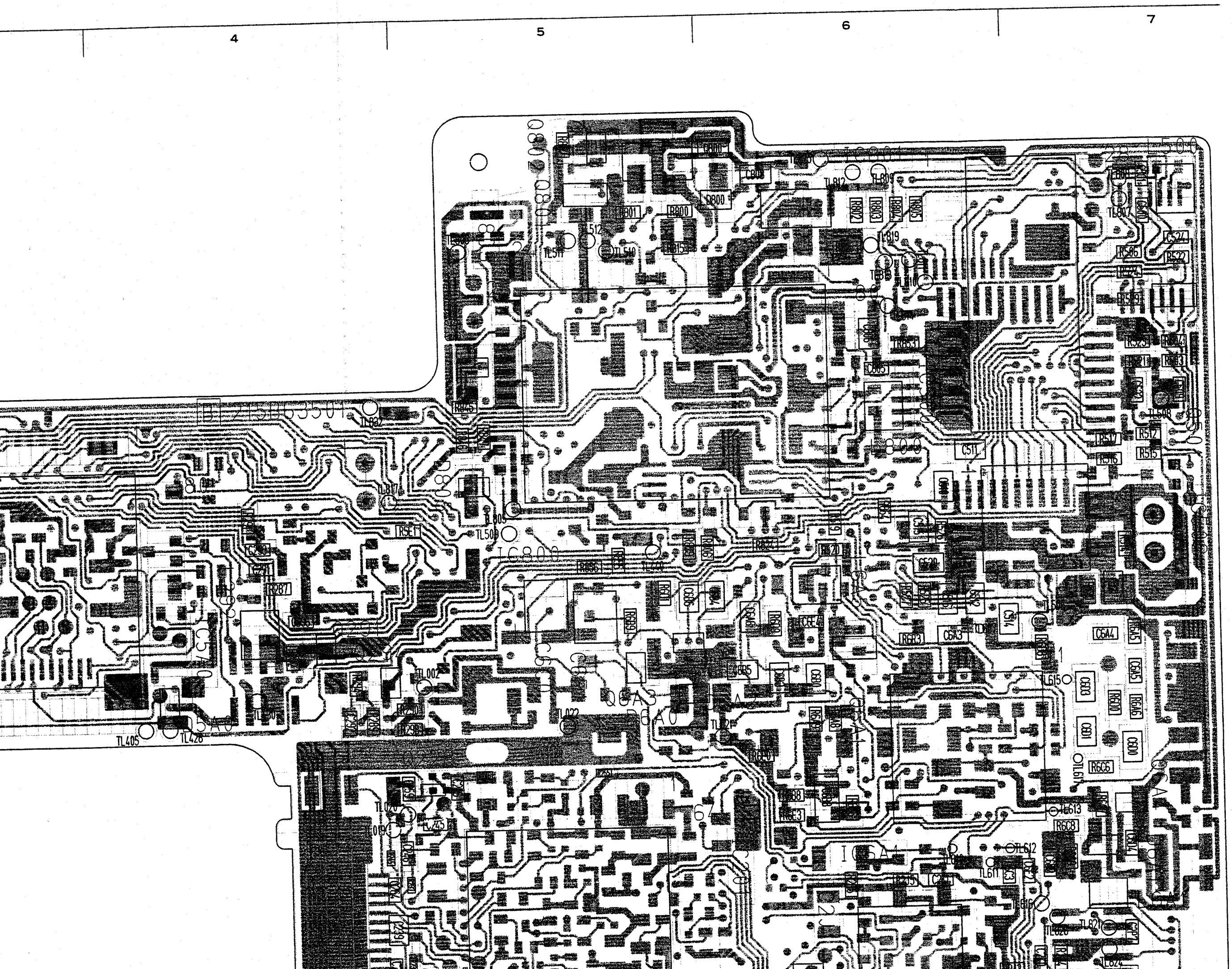
2
3
4
A
B
C
C418
TL456
R407
C553
R425
TL443
FL400
R418
C419
R400
TL454
TL423
R423
TL416
TL405
TL428
TL032
TL817
TL809
TL509
R287
R845
TL002
IC80


4
5
6
7
IC800
IC6A1
Q6A3
D6A0
Q800
D800
D801
R800
R802
R803
R804
R805
C803
C805
C511
C520
C524
R522
R586
R519
R525
R523
R521
R512
R517
R516
R515
C514
C6A3
C6A4
C6A5
R6A6
C6D0
C6D1
C6D3
R6D0
R6C6
R6C8
R6E0
R6E3
R6B3
R610
R611
R6B9
C6B6
C6B5
C6E4
R827
R856
R845
R5E1
R287
R290
TL405
TL426
TL509
TL510
TL511
TL512
TL508
TL807
TL809
TL812
TL817
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TL002
TL022
TL611
TL612
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TL616
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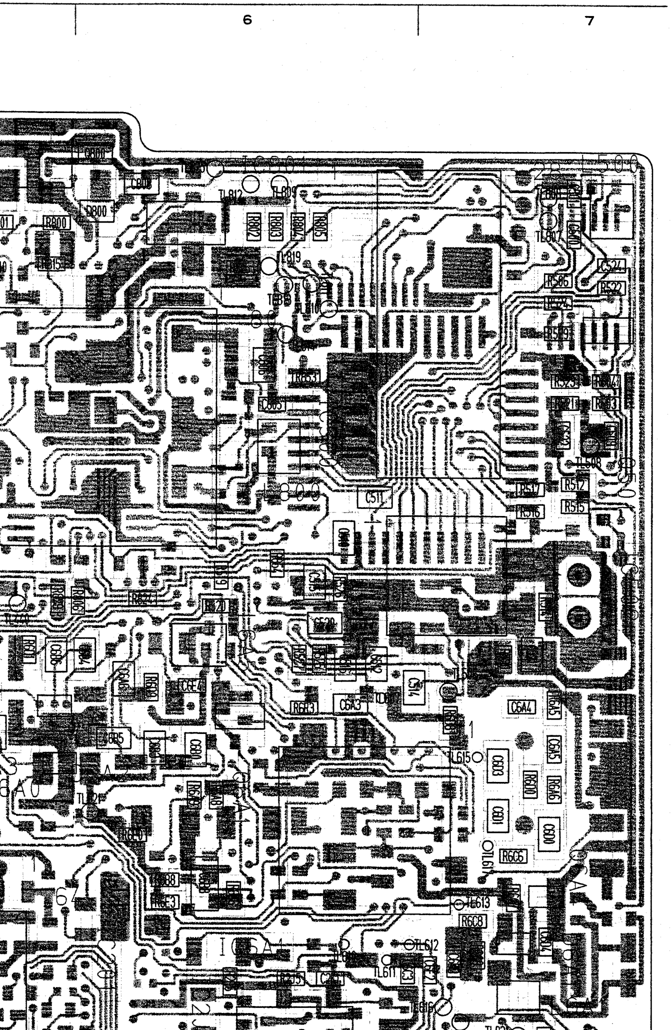
TL620
TL621
TL624



PCB – VTR (B SIDE)

SYMBOL NO.	ADDRESS
C200	D-5
C201	D-5
C202	D-5
C203	D-5
C205	E-5
C206	D-5
C207	D-5
C208	D-4
C209	D-4
C210	D-4
C213	D-6
C214	D-5
C216	D-5
C217	D-5
C219	D-5
C223	D-5
C231	D-5
C232	D-5
C234	D-4
C239	C-4
C240	D-4
C245	C-5
C246	C-5
C256	C-5
C259	C-5
C264	C-4
C266	D-4
C291	B-4
C292	C-4
C293	B-4
C296	B-4
C297	D-4
C2A0	D-7
C2A0	D-6
C2A5	E-6
C2A6	E-6
C2B1	E-6
C2B2	E-6
C2B3	E-6
C2B4	E-6
C2C6	E-6
C2C8	E-6
C2D0	E-6
C2D1	E-6
C2D2	E-5
C2D3	E-5
C2D4	E-5
C2D5	E-5
C2F0	E-5
C2F1	E-5
C2F2	E-5
C2F3	E-5
C2F4	E-5
C2F9	E-5
C2H1	E-5
C2H2	E-5
C2H4	D-5
C2J0	D-6
C2J1	D-6
C2J5	D-7

SYMBOL NO.	ADDRESS
C2J6	D-7
C2J7	D-7
C2J8	D-7
C2J9	D-6
C2K0	D-7
C2K1	C-6
C2P0	E-6
C2P1	E-6
C2P2	E-6
C2P3	E-6
C2P7	C-7
C2P8	E-6
C2R0	D-7
C2R1	D-7
C2R2	E-7
C300	E-2
C302	E-2
C303	E-2
C304	E-2
C305	E-2
C306	E-2
C307	E-2
C308	E-2
C309	E-2
C325	E-2
C355	E-3
C356	E-3
C356	E-3
C357	E-3
C358	E-3
C359	E-2
C3A1	E-4
C3A3	E-4
C3A7	E-3
C3A8	E-3
C3A9	E-3
C3B0	E-3
C3B3	E-3
C3B5	E-3
C3C1	E-4
C3C3	E-3
C3C7	E-4
C3C8	E-3
C3C9	E-3
C3D1	E-4
C3D2	E-4
C3D3	E-4
C3D4	E-4
C3D5	E-4
C3D6	E-4
C3D7	E-4
C3D8	E-4
C3D9	E-4
C410	B-2
C413	C-2
C415	C-2
C418	A-2
C419	B-2
C420	B-2
C500	A-7

SYMBOL NO.	ADDRESS
C501	A-7
C509	B-7
C510	B-6
C511	B-6
C512	B-6
C514	B-6
C515	B-6
C516	B-6
C520	B-6
C521	B-7
C522	B-7
C524	A-7
C5A4	B-2
C5A5	A-2
C5E3	B-2
C6A3	B-6
C6A4	B-7
C6A5	C-7
C6A6	B-6
C6B0	C-6
C6B3	C-6
C6B4	B-6
C6B5	C-6
C6B6	B-5
C6B7	C-6
C6B8	C-6
C6C0	B-5
C6C8	C-7
C6D0	C-7
C6D1	C-7
C6D2	C-7
C6D3	C-7
C6D4	C-7
C6E1	C-5
C6E2	C-7
C6E4	B-6
C803	A-5
C805	B-6
C806	A-6
C808	A-6
D2A0	D-6
D2A2	D-6
D2A3	E-6
D2A4	E-6
D2J0	D-7
D2P0	E-6
D3A0	E-4
D5A0	C-4
D5D0	B-1
D6A0	C-5
D6A1	C-7
D6A2	C-6
D800	A-6
D803	A-5
D805	B-5
DL6A1	D-7
FL400	B-2

SYMBOL NO.	ADDRESS
IC201	C-6
IC2A1	D-6
IC2J1	C-6
IC2P1	E-7
IC2R1	D-7
IC300	E-2
IC350	E-2
IC3A0	E-4
IC401	B-2
IC402	A-2
IC500	B-6
IC502	B-7
IC5A0	B-4
IC5A1	B-2
IC5D0	B-1
IC6A1	C-6
IC800	B-5
IC801	A-6
IC803	A-5
L200	E-5
L201	D-5
L292	B-4
L2A2	E-6
L2A4	E-6
L2D1	E-5
L2D2	E-5
L2F0	E-5
L2F1	E-5
L2F2	E-5
L2H2	D-6
L2P1	E-6
L321	E-1
L3A0	E-4
L500	A-7
L6A1	C-7
L6A5	B-6
L800	B-6
Q201	D-5
Q205	D-5
Q221	D-6
Q228	C-5
Q291	B-4
Q294	B-4
Q2A1	D-5
Q2A3	E-6
Q2A4	E-6
Q2A7	E-6
Q2A9	D-6
Q2D0	E-5
Q2D1	E-5
Q2D2	E-5
Q2F0	E-5
Q2F1	E-5
Q2F2	E-5
Q2F3	E-5
Q2H0	E-5
Q2H2	E-5

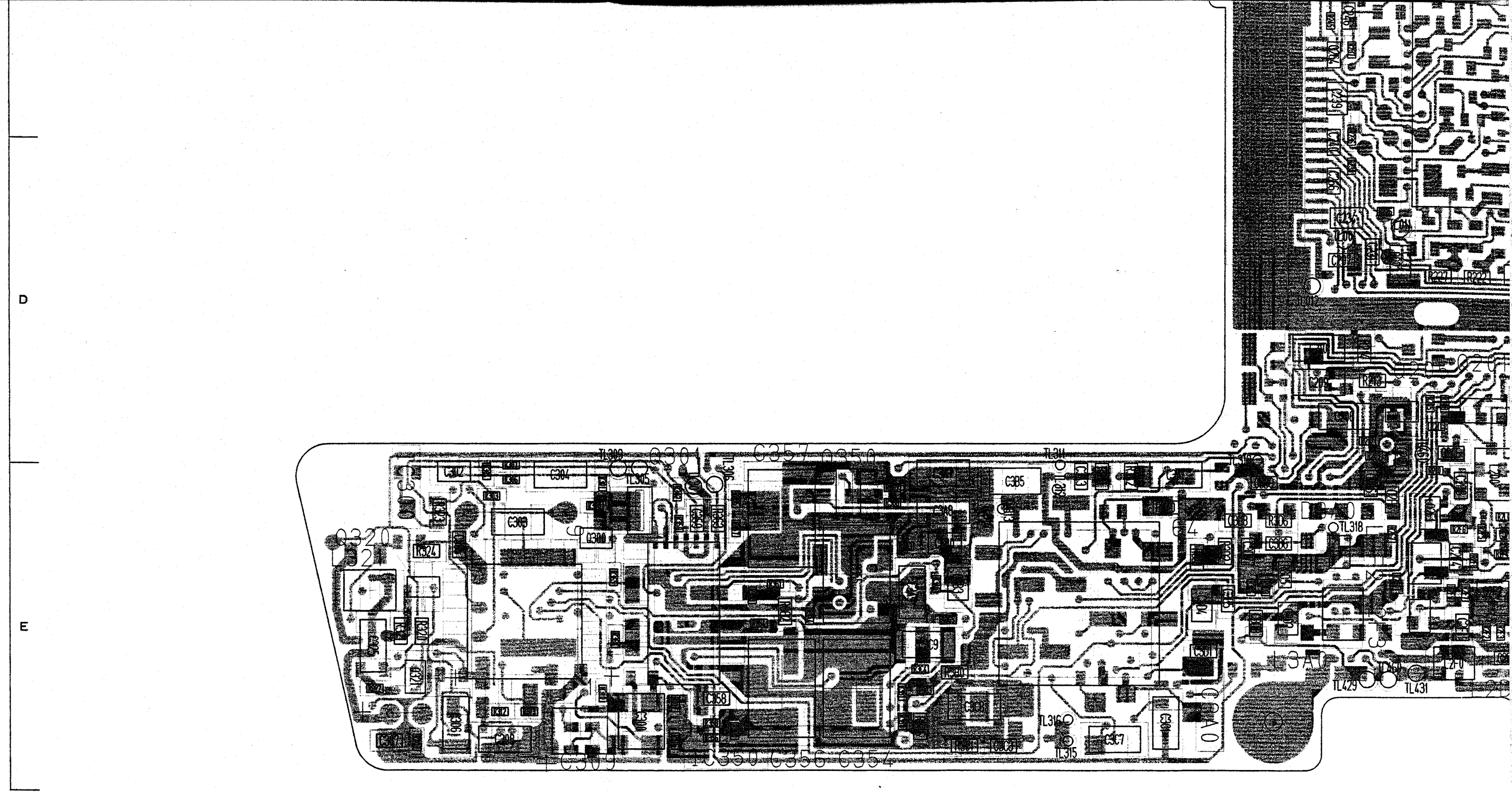
SYMBOL NO.	ADDRESS
Q2H3	E-5
Q2H4	E-5
Q2P0	E-6
Q300	E-2
Q301	E-2
Q320	E-1
Q321	E-2
Q350	E-3
Q3A0	D-7
Q407	B-2
Q501	B-7
Q5D0	B-1
Q6A1	C-6
Q6A3	C-5
Q6A4	C-7
Q800	A-6
Q801	A-5
Q802	A-5
R200	D-5
R201	D-5
R202	D-5
R203	D-5
R205	D-5
R209	D-5
R210	E-5
R211	D-5
R212	D-5
R213	D-5
R214	D-5
R216	D-5
R222	D-5
R226	D-5
R227	D-5
R236	C-5
R237	C-5
R237	D-5
R245	C-4
R246	C-5
R255	C-5
R260	D-6
R261	D-5
R263	D-5
R265	D-5
R267	D-5
R280	D-5
R287	B-4
R289	C-4
R290	C-5
R291	B-4
R292	B-4
R294	C-4
R298	C-5
R299	C-5
R2A3	D-6
R2A5	E-6
R2A6	D-6
R2A7	D-5
R2A8	D-6
R2A9	D-6

SYMBOL NO.	ADDRESS
R2B1	E-6
R2B2	E-6
R2B7	D-6
R2C0	D-6
R2C1	E-6
R2C4	D-6
R2C5	D-7

SYMBOL NO.	ADDRESS
R2R1	D-7
R300	E-2
R301	E-2
R302	E-2
R303	E-2
R304	E-2
R306	E-2

SYMBOL NO.	ADDRESS
R422	B-2
R423	C-2
R424	C-2
R425	B-2
R426	B-2
R427	C-2
R431	A-2

SYMBOL NO.	ADDRESS
R804	A-6
R805	A-6
R806	B-6
R814	A-5
R815	A-5
R824	B-6
R825	A-6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Q300
C385
Q320
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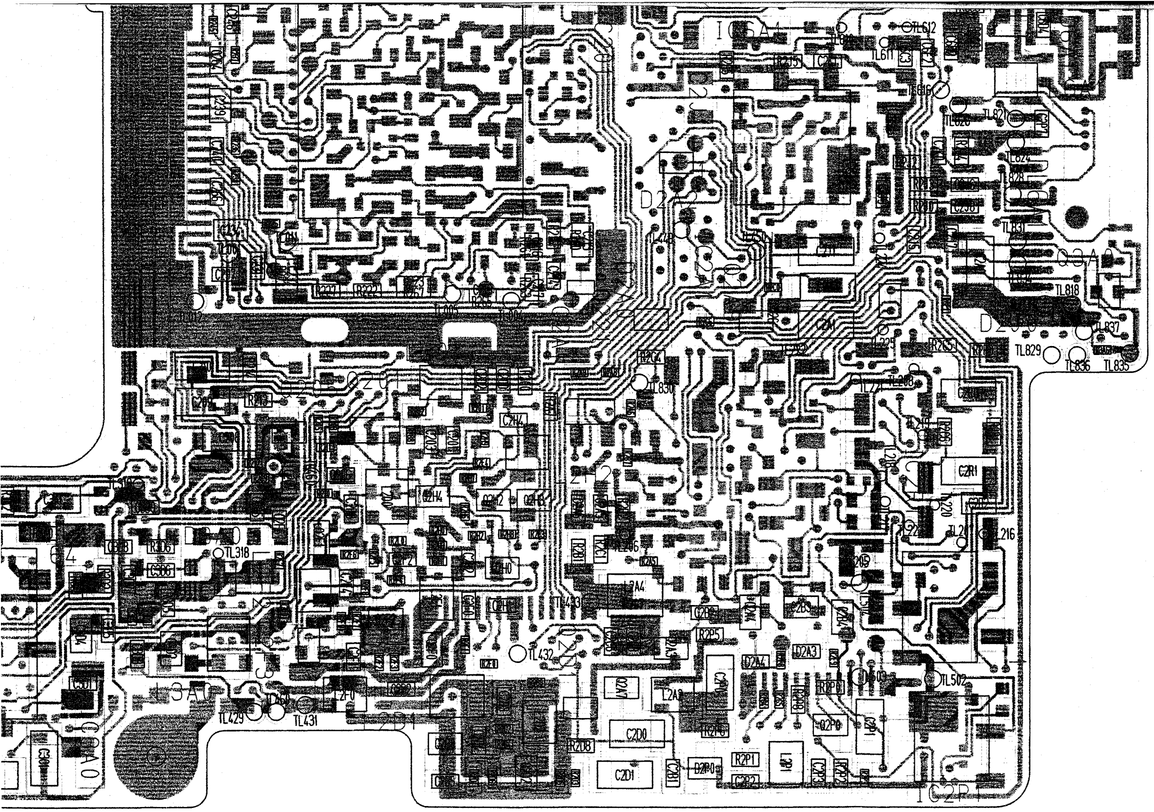
TL318
R306
C386
C358
TL316
TL315
C309
IC350
C356
C354
TL429
TL431
R227
R222
R213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Q3A0
TL818
TL837
TL829
TL836
TL835
R222
R221
TL605
TL604
TL612
R2G4
TL830
C2H4
C2R1
TL216
TL201
Q2H4
TL206
TL208
TL225
L2A4
C2B0
R2P5
D2A4
LD2A3
TL503
TL502
Q2P0
C2D0
C2D1
R2D8
R2P1
D2P0
C2B1
C2B2
L2A0
IC2P1
TL432
TL433
TL429
TL431
TL318
R306
C306
C501
L3A0

R2B1	E-6
R2B2	E-6
R2B7	D-6
R2C0	D-6
R2C1	E-6
R2C4	D-6
R2C5	D-7
R2C6	D-7
R2D0	E-5
R2D1	E-5
R2D2	E-5
R2D3	E-6
R2D4	E-5
R2D5	E-5
R2D6	E-5
R2D8	E-6
R2E3	E-5
R2E4	D-5
R2E5	C-6
R2E7	E-5
R2E8	E-6
R2E9	E-6
R2F0	E-5
R2F1	E-5
R2F2	E-5
R2F3	E-5
R2F4	E-5
R2F5	E-5
R2F6	E-5
R2F7	E-5
R2F8	E-5
R2F9	E-5
R2G0	E-5
R2G4	E-6
R2G5	E-6
R2G6	D-6
R2G7	E-6
R2H0	E-5
R2H1	E-5
R2H2	E-5
R2H3	E-5
R2H6	E-5
R2H7	D-5
R2H8	E-5
R2H9	D-5
R2J0	D-7
R2J1	C-6
R2J2	D-6
R2J3	D-7
R2J4	D-7
R2J5	C-6
R2L0	E-5
R2P0	E-6
R2P1	E-6
R2P2	E-6
R2P3	E-6
R2P5	E-6
R2P6	E-6
R2P8	E-6
R2R0	D-7

R2R1
R300
R301
R302
R303
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R368
R3A0
R3A1
R3A2
R3A3
R3A4
R3A5
R3A6
R3B0
R3C1
R3C3
R3C4
R3C5
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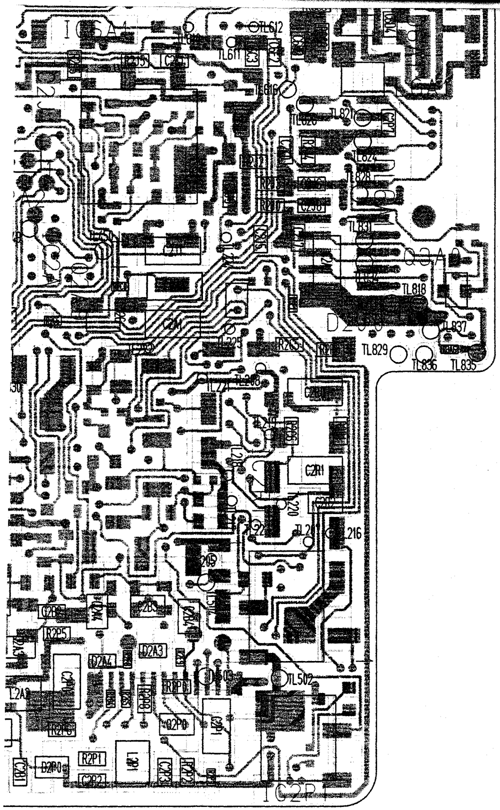
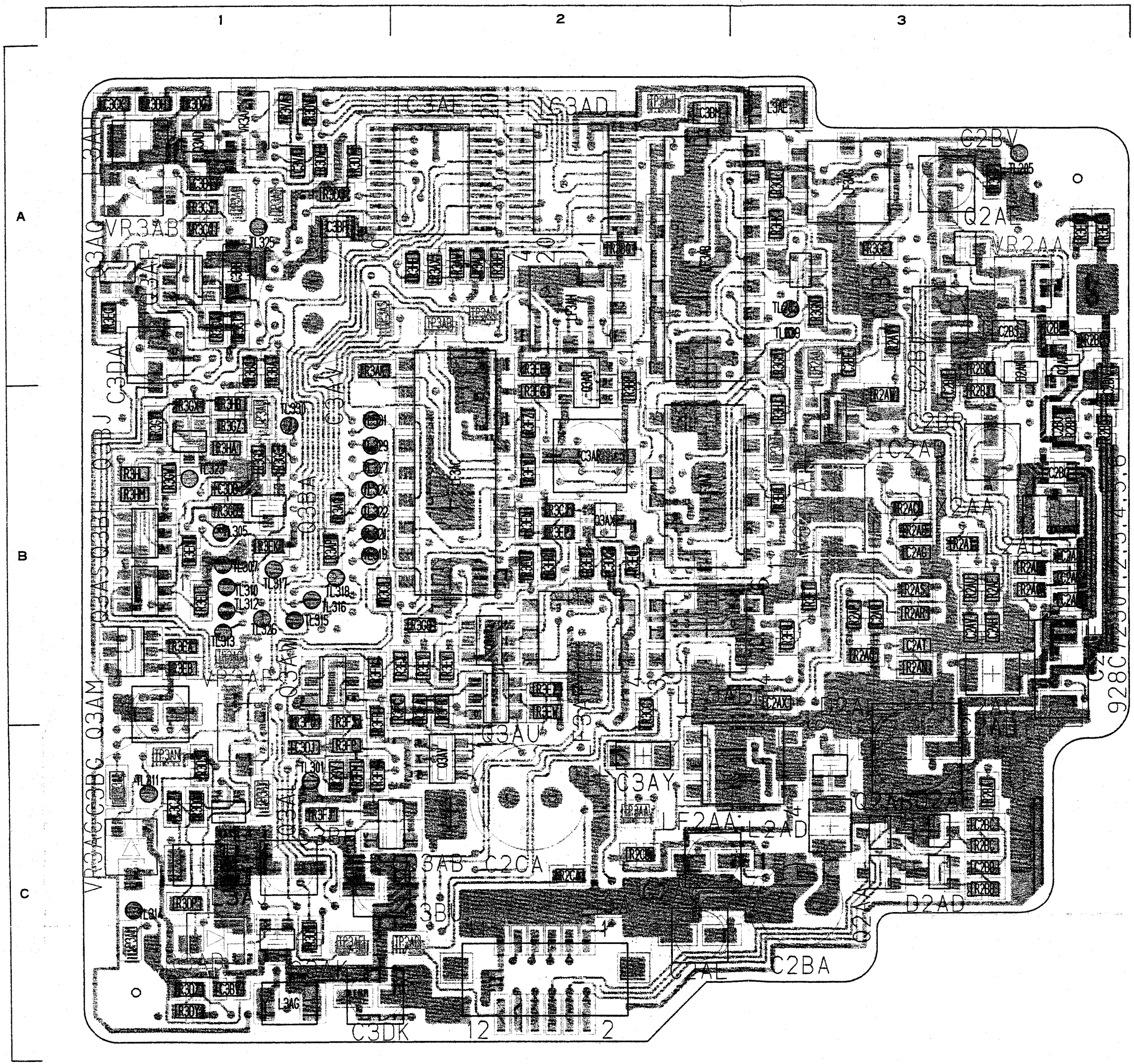
R421



R2B1	E-6	R2R1	D-7	R422	B-2	R804	A-6
R2B2	E-6	R300	E-2	R423	C-2	R805	A-6
R2B7	D-6	R301	E-2	R424	C-2	R806	B-6
R2C0	D-6	R302	E-2	R425	B-2	R814	A-5
R2C1	E-6	R303	E-2	R426	B-2	R815	A-5
R2C4	D-6	R304	E-2	R427	C-2	R824	B-6
R2C5	D-7	R306	E-2	R431	A-2	R825	A-6
R2C6	D-7	R307	E-2	R432	A-2	R829	B-5
R2D0	E-5	R309	E-2	R433	A-2	R845	B-5
R2D1	E-5	R310	E-2	R434	A-2	R846	B-5
R2D2	E-5	R312	E-2	R443	C-2	R847	B-5
R2D3	E-6	R313	E-2	R444	C-2	R853	A-6
R2D4	E-5	R316	E-2	R500	C-1	R854	B-6
R2D5	E-5	R317	E-2	R501	C-1	R855	B-5
R2D6	E-5	R320	E-2	R503	B-7	R856	B-5
R2D8	E-6	R321	E-2	R504	A-7		
R2E3	E-5	R322	E-2	R506	A-7	TL456	A-2
R2E4	D-5	R323	E-2	R510	B-7	TL463	A-2
R2E5	C-6	R324	E-2	R512	B-7	TL806	A-5
R2E7	E-5	R350	E-3	R514	B-7		
R2E8	E-6	R351	E-3	R515	B-7		
R2E9	E-6	R353	E-3	R516	B-7		
R2F0	E-5	R354	E-3	R517	B-7		
R2F1	E-5	R355	E-3	R519	B-6		
R2F2	E-5	R356	E-3	R520	B-6		
R2F3	E-5	R357	E-3	R521	B-7		
R2F4	E-5	R358	E-3	R522	A-7		
R2F5	E-5	R359	E-2	R523	A-7		
R2F6	E-5	R360	E-3	R524	A-7		
R2F7	E-5	R361	E-3	R525	B-6		
R2F8	E-5	R362	E-3	R526	B-6		
R2F9	E-5	R363	E-3	R527	B-6		
R2G0	E-5	R364	E-2	R529	A-7		
R2G4	E-6	R365	E-2	R5B6	B-2		
R2G5	E-6	R366	E-3	R5C4	B-2		
R2G6	D-6	R367	E-3	R5E1	B-5		
R2G7	E-6	R368	E-3	R5E6	B-3		
R2H0	E-5	R3A0	E-4	R608	B-7		
R2H1	E-5	R3A1	E-4	R6A5	B-7		
R2H2	E-5	R3A2	E-4	R6A6	C-7		
R2H3	E-5	R3A3	E-3	R6A8	C-6		
R2H6	E-5	R3A4	E-3	R6A9	C-6		
R2H7	D-5	R3A5	E-3	R6B6	C-6		
R2H8	E-5	R3A6	D-7	R6B8	C-6		
R2H9	D-5	R3B0	E-3	R6B9	B-5		
R2J0	D-7	R3C1	E-3	R6C6	C-7		
R2J1	C-6	R3C3	E-3	R6C7	C-7		
R2J2	D-6	R3C4	E-3	R6C8	C-7		
R2J3	D-7	R3C5	E-3	R6C9	C-7		
R2J4	D-7	R3D1	E-4	R6D0	C-7		
R2J5	C-6	R3D2	E-4	R6D1	B-5		
R2L0	E-5	R3D3	E-4	R6D9	B-6		
R2P0	E-6	R3D4	E-4	R6E0	C-6		
R2P1	E-6	R3D5	E-4	R6E3	C-6		
R2P2	E-6	R3D6	E-4	R6F1	D-7		
R2P3	E-6	R400	A-2	R6R3	B-6		
R2P5	E-6	R407	B-2	R800	A-5		
R2P6	E-6	R409	B-2	R801	A-5		
R2P8	E-6	R418	B-2	R802	A-6		
R2R0	D-7	R421	B-2	R803	A-6		

PCB-SD/PC(A SIDE)



PCB – SD／PC (A SIDE)

SYMBOL NO.	ADDRESS	SYMBOL NO.	ADDRESS	SYMBOL NO.	ADDRES
C2AC	C-2	L3AG	C-1	R3AK	A-1
C2AD	C-3	L3AH	A-1	R3AL	A-2
C2AE	C-2	L3AJ	C-1	R3AP	B-1
C2AF	B-3			R3AQ	B-1
C2AG	B-3	LF2AA	C-2	R3AW	A-2
C2AH	B-3	LF3AA	B-2	R3AX	A-2
C2AJ	B-3	LF3AB	A-2	R3BA	A-1
C2AK	B-3	LF3AC	B-2	R3BC	A-1
C2AL	B-3	LF3AE	B-2	R3BF	A-2
C2AT	B-3	LF3AF	B-2	R3BH	B-3
C2AU	B-3	LF3AG	A-3	R3BP	B-2
C2AV	B-3	LF3AH	A-2	R3BQ	A-2
C2AX	B-3			R3CB	B-1
C2BA	C-3	Q2AA	C-3	R3CC	B-2
C2BB	C-3	Q2AB	C-3	R3CJ	B-2
C2BC	C-3	Q2AE	A-3	R3CQ	A-1
C2BE	A-3	Q2AF	A-3	R3CS	A-1
C2BG	C-1	Q3AD	A-1	R3CT	A-1
C2BJ	A-3	Q3AF	A-1	R3CU	A-1
C2BM	B-3	Q3AK	C-1	R3DG	A-1
C2BN	B-3	Q3AL	C-1	R3DH	A-1
C2BQ	B-3	Q3AM	B-1	R3DM	C-1
C2BR	B-3	Q3AQ	A-1	R3DP	C-1
C2BS	A-3	Q3AR	A-2	R3DQ	C-1
C2BU	B-3	Q3AS	B-1	R3DS	C-1
C2BV	A-3	Q3AT	B-2	R3DT	A-1
C2CA	C-2	Q3AU	C-2	R3DU	A-1
C3AR	B-2	Q3AV	C-2	R3DV	A-1
C3AV	B-1	Q3AW	B-1	R3DW	A-1
C3AY	C-2	Q3AX	B-2	R3DY	C-1
C3BH	C-1	Q3BA	B-1	R3DZ	C-1
C3BM	A-2	Q3BG	A-3	R3EA	B-1
C3BP	A-1	Q3BH	B-1	R3EB	B-1
C3BT	A-1	Q3BJ	B-1	R3EC	A-1
C3BU	C-2			R3ED	A-3
C3BV	C-1	R2AC	B-3	R3EE	A-3
C3CJ	C-1	R2AD	B-3	R3EF	A-2
C3CK	A-1	R2AE	B-3	R3EG	B-2
C3DA	A-1	R2AG	B-3	R3EK	B-1
C3DB	B-1	R2AH	B-3	R3EL	B-1
C3DC	B-2	R2AN	B-3	R3EM	B-1
C3DD	A-1	R2AP	B-3	R3EN	B-2
C3DJ	C-1	R2AQ	B-3	R3EP	B-2
C3DK	C-1	R2AR	B-3	R3EQ	B-2
C3VA	A-1	R2AS	B-3	R3ER	B-2
		R2AT	B-3	R3EU	B-2
D2AD	C-3	R2AU	B-3	R3EV	B-2
D2AE	C-3	R2AV	A-3	R3EW	B-2
D2AK	A-3	R2AW	B-3	R3EX	B-2
D2AL	B-3	R2BA	C-3	R3EY	B-2
D3AB	C-2	R2BB	C-3	R3EZ	B-2
		R2BC	C-3	R3FA	B-2
IC2AD	B-3	R2BD	B-3	R3FB	B-2
IC3AD	A-2	R2BJ	B-3	R3FC	B-2
IC3AE	A-2	R2BK	A-3	R3FJ	C-1
		R2BL	A-3	R3FK	C-1
L2AB	B-3	R2BM	A-3	R3FM	C-1
L2AC	B-3	R2BP	B-3	R3FN	B-1
L2AD	C-3	R2CA	C-2	R3FP	C-1
L3AE	A-3	R2CB	C-2	R3FQ	B-1

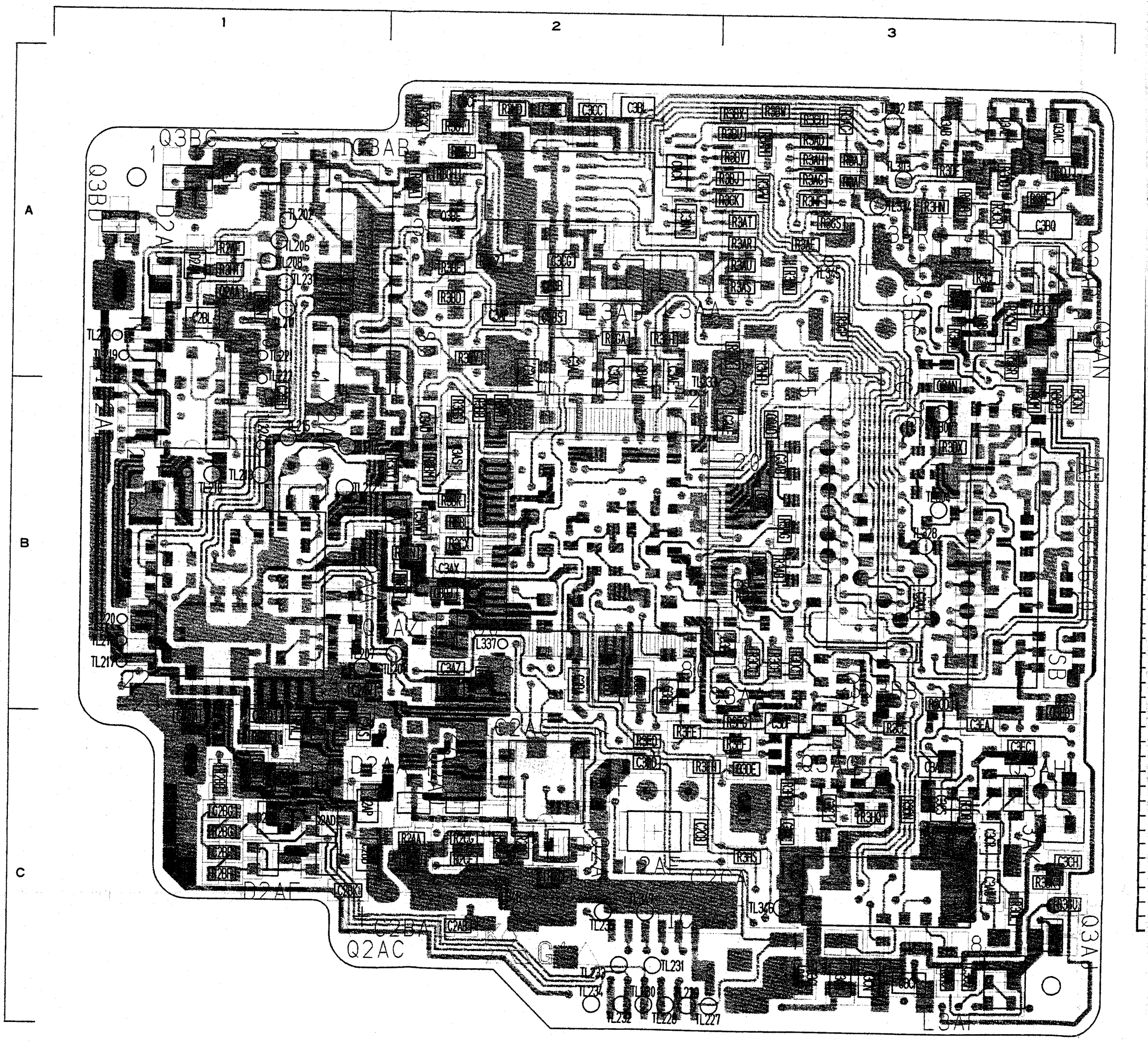
SIDE)

SYMBOL NO.	ADDRESS
L3AG	C-1
L3AH	A-1
L3AJ	C-1
LF2AA	C-2
LF3AA	B-2
LF3AB	A-2
LF3AC	B-2
LF3AE	B-2
LF3AF	B-2
LF3AG	A-3
LF3AH	A-2
Q2AA	C-3
Q2AB	C-3
Q2AE	A-3
Q2AF	A-3
Q3AD	A-1
Q3AF	A-1
Q3AK	C-1
Q3AL	C-1
Q3AM	B-1
Q3AQ	A-1
Q3AR	A-2
Q3AS	B-1
Q3AT	B-2
Q3AU	C-2
Q3AV	C-2
Q3AW	B-1
Q3AX	B-2
Q3BA	B-1
Q3BG	A-3
Q3BH	B-1
Q3BJ	B-1
R2AC	B-3
R2AD	B-3
R2AE	B-3
R2AG	B-3
R2AH	B-3
R2AN	B-3
R2AP	B-3
R2AQ	B-3
R2AR	B-3
R2AS	B-3
R2AT	B-3
R2AU	B-3
R2AV	A-3
R2AW	B-3
R2BA	C-3
R2BB	C-3
R2BC	C-3
R2BD	B-3
R2BJ	B-3
2BK	A-3
2BL	A-3
2BM	A-3
2BP	B-3
2CA	C-2
2CB	C-2

SYMBOL NO.	ADDRESS
R3AK	A-1
R3AL	A-2
R3AP	B-1
R3AQ	B-1
R3AW	A-2
R3AX	A-2
R3BA	A-1
R3BC	A-1
R3BF	A-2
R3BH	B-3
R3BP	B-2
R3BQ	A-2
R3CB	B-1
R3CC	B-2
R3CJ	B-2
R3CQ	A-1
R3CS	A-1
R3CT	A-1
R3CU	A-1
R3DG	A-1
R3DH	A-1
R3DM	C-1
R3DP	C-1
R3DQ	C-1
R3DS	C-1
R3DT	A-1
R3DU	A-1
R3DV	A-1
R3DW	A-1
R3DY	C-1
R3DZ	C-1
R3EA	B-1
R3EB	B-1
R3EC	A-1
R3ED	A-3
R3EE	A-3
R3EF	A-2
R3EG	B-2
R3EK	B-1
R3EL	B-1
R3EM	B-1
R3EN	B-2
R3EP	B-2
R3EQ	B-2
R3ER	B-2
R3EU	B-2
R3EV	B-2
R3EW	B-2
R3EX	B-2
R3EY	B-2
R3EZ	B-2
R3FA	B-2
R3FB	B-2
R3FC	B-2
R3FJ	C-1
R3FK	C-1
R3FM	C-1
R3FN	B-1
R3FP	C-1
R3FQ	B-1

SYMBOL NO.	ADDRESS
R3FR	B-1
R3FS	B-1
R3FT	B-3
R3FU	B-3
R3FY	B-2
R3FZ	B-2
R3GB	B-1
R3GC	B-1
R3GD	B-1
R3GE	A-3
R3GG	A-3
R3GL	A-3
R3GM	A-3
R3GN	A-3
R3GQ	B-2
R3GV	C-1
R3GW	B-1
R3GX	B-1
R3GY	B-1
R3GZ	B-1
R3HA	B-1
R3HB	B-1
R3HE	A-2
R3HJ	B-3
R3HK	A-3
R3HL	B-1
R3HM	B-1
R3HR	B-2
R3VA	A-1
TP2AA	A-3
TP2AB	C-2
TP3AA	C-2
TP3AB	A-2
TP3AE	C-1
TP3AG	B-1
TP3AJ	A-2
TP3AL	C-1
TP3AM	C-1
TP3AN	C-1
TP3AP	A-1
TP3AQ	A-1
TP3AR	A-2
TP3AS	A-1
TP3AT	B-3
TP3AU	B-1
TP3AY	C-1
VC2AA	B-3
VR2AA	A-3
VR3AA	A-1
VR3AB	A-1
VR3AC	C-1
VR3AD	C-1
VR3AE	B-1
X2AA	B-3

PCB-SD/PC(B SIDE)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C2BA
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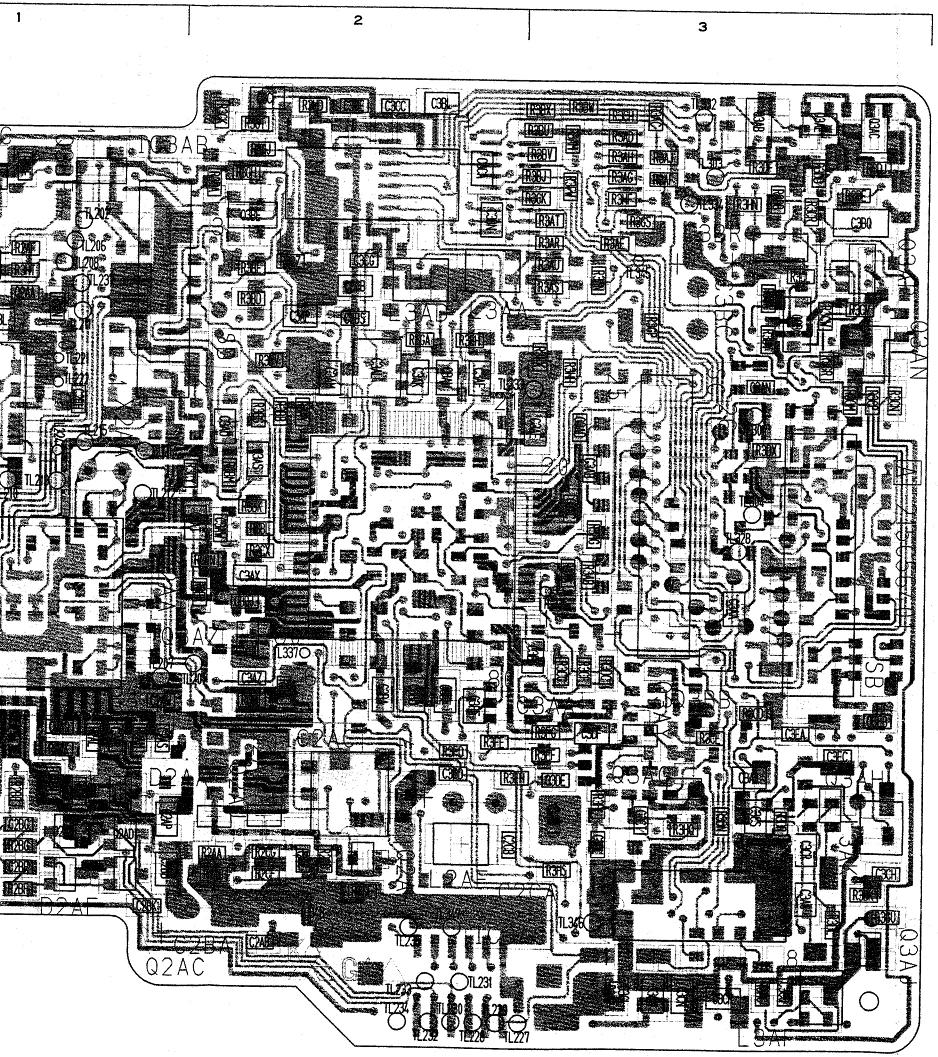
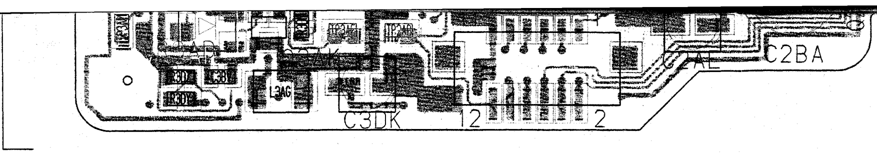


PCB – SD／PC (B SIDE)

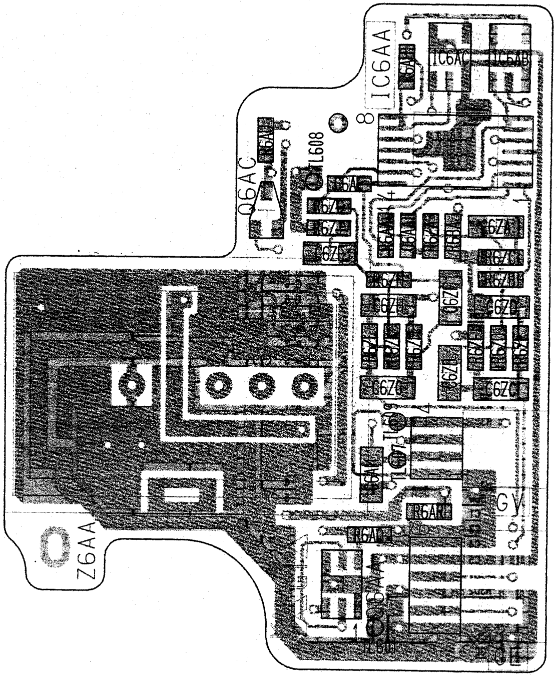
SYMBOL NO.	ADDRESS	SYMBOL NO.	ADDRESS	SYMBOL NO.	ADDRESS	SYMBOL NO.	ADDRESS
C2AA	A-1	C3CP	C-3	R2AM	C-1	R3DA	A-2
C2AB	C-2	C3CQ	C-3	R2BE	C-1	R3DB	A-3
C2AM	C-1	C3CR	C-3	R2BF	C-1	R3DC	B-3
C2AN	C-1	C3CS	C-3	R2BG	C-1	R3DD	A-3
C2AP	C-1	C3CT	C-3	R2BN	A-1	R3DE	A-3
C2AQ	C-1	C3DD	C-2	R2CC	C-2	R3DF	A-3
C2AR	C-1	C3DE	C-3	R2CD	C-2	R3DJ	A-3
C2AS	C-1	C3DF	C-3	R2CE	C-2	R3DK	C-3
C2AW	B-1	C3DG	B-3	R2CF	C-2	R3DL	C-3
C2BA	C-2	C3DL	C-3	R2CG	C-2	R3DN	C-3
C2BD	C-1	C3EA	C-3	R3AA	B-3	R3DR	C-3
C2BF	C-1	C3EB	B-3	R3AB	B-3	R3DX	B-3
C2BG	C-1	C3EC	C-3	R3AC	A-3	R3EH	A-2
C2BH	B-1			R3AD	A-3	R3FD	C-2
C2BK	C-1	D2AA	C-1	R3AE	A-3	R3FE	C-2
C2BL	A-1	D2AF	C-1	R3AF	A-3	R3FF	C-3
C2CA	C-3	D2AG	C-1	R3AG	A-3	R3FG	C-3
C2CB	C-2	D2AH	A-1	R3AH	A-3	R3FH	C-2
C3AA	B-3	D2AJ	A-1	R3AJ	A-3	R3FL	C-3
C3AB	B-3			R3AM	A-3	R3FV	A-2
C3AC	B-3	IC2AA	B-1	R3AN	A-3	R3FW	A-3
C3AD	B-3	IC2AB	B-1	R3AR	A-3	R3FX	A-3
C3AE	B-3	IC2AC	C-2	R3AS	A-3	R3GA	A-2
C3AF	A-2	IC3AA	B-3	R3AT	A-3	R3GF	A-1
C3AG	C-3	IC3AB	A-1	R3AU	A-3	R3GH	A-2
C3AH	A-2	IC3AC	C-2	R3AY	B-2	R3GJ	A-2
C3AJ	C-3			R3BB	B-2	R3GK	A-2
C3AK	A-2	L2AF	C-2	R3BD	A-2	R3GP	A-3
C3AL	A-2	L3AA	A-2	R3BE	A-2	R3GR	A-3
C3AM	A-2	L3AD	A-2	R3BG	B-2	R3GS	A-3
C3AN	A-3	L3AF	C-3	R3BJ	A-3	R3GT	A-2
C3AP	A-2	L3AK	C-3	R3BK	B-2	R3GU	C-3
C3AS	B-2			R3BL	B-2	R3HC	C-3
C3AT	B-2	Q2AC	C-1	R3BM	B-2	R3HD	A-2
C3AU	B-2	Q2AD	C-1	R3BN	B-2	R3HF	A-3
C3AW	B-2	Q2AH	C-2	R3BR	B-2	R3HG	B-3
C3AX	B-2	Q2AJ	C-2	R3BS	B-2	R3HH	A-3
C3AZ	B-2	Q2AK	C-2	R3BT	B-2	R3HN	A-3
C3BA	B-2	Q3AB	A-3	R3BU	A-3	R3HP	C-3
C3BC	A-3	Q3AC	A-3	R3BV	A-3	R3HQ	C-3
C3BC	A-3	Q3AE	A-3	R3BW	A-3	R3HS	C-3
C3BD	B-2	Q3AG	C-3	R3BX	A-3	R3HT	A-1
C3BE	B-2	Q3AH	C-3	R3BY	A-3		
C3BF	B-2	Q3AJ	C-3	R3CA	A-3	X2AA	B-1
C3BJ	B-2	Q3AN	A-3	R3CD	B-3		
C3BL	A-2	Q3AP	A-3	R3CE	C-3		
C3BN	A-2	Q3AY	B-3	R3CF	B-3		
C3BQ	A-3	Q3AZ	B-2	R3CG	B-3		
C3BR	A-3	Q3BB	B-3	R3CH	A-3		
C3BS	A-2	Q3BC	A-1	R3CK	A-3		
C3CA	A-2	Q3BD	A-1	R3CL	A-3		
C3CB	A-2	Q3BE	A-2	R3CM	B-3		
C3CC	A-2	Q3BF	A-1	R3CN	B-3		
C3CE	A-2			R3CP	B-3		
C3CF	A-2	R2AA	C-2	R3CR	A-3		
C3CG	A-2	R2AB	C-2	R3CV	A-3		
C3CH	C-3	R2AF	A-1	R3CW	A-3		
C3CL	C-3	R2AJ	C-1	R3CX	B-2		
C3CM	C-3	R2AK	C-1	R3CY	B-2		
C3CN	C-3	R2AL	C-1	R3CZ	A-2		

[illegible]	[illegible]	R2CA	C-2	R3FP	C-1
L3AE	A-3	R2CB	C-2	R3FQ	B-1



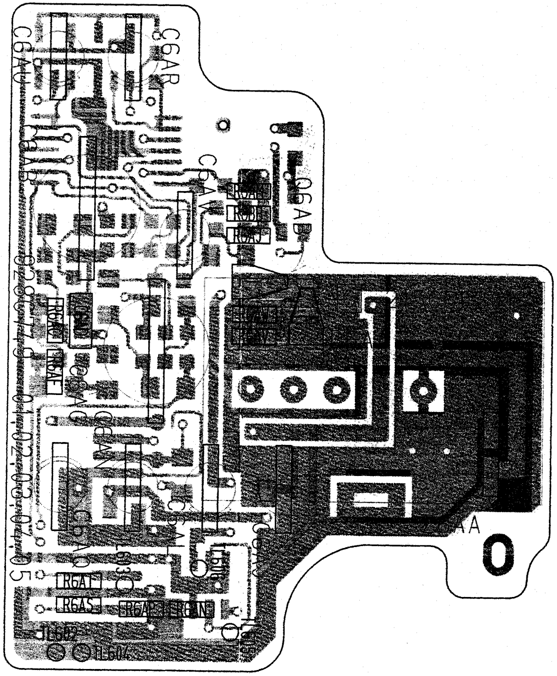
C2BA
C2AL
C3DK
L3AG
12
2

PCB-GYRO SENS(A SIDE) 〔HS-CX4 model only〕



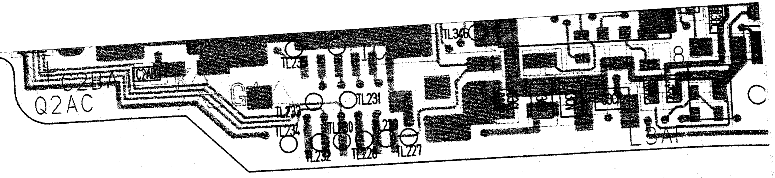
IC6AA
IC6AC
IC6AB
Q6AC
TL608
8
Z6AA
R6AR
R6AQ
GV
TL601

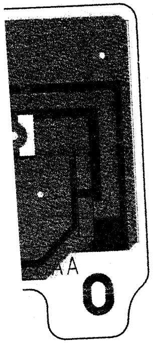
PCB-GYRO SENS(B SIDE) 〔HS-CX4 model only〕



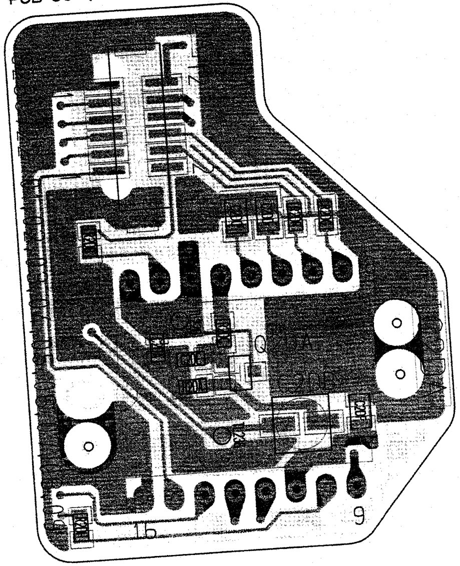
C6AU
C6AR
C6AW
Q6AB
R6AT
R6AS
R6AP
R6AN
TL602
TL604

C-3	R2CA	C-2	R3FP	C-1		
A-3	R2CB	C-2	R3FQ	B-1		

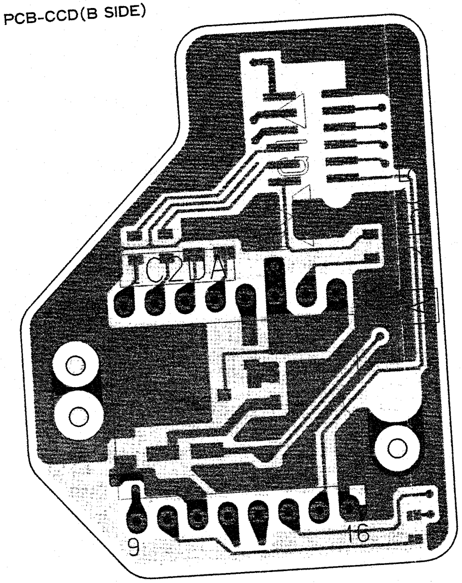

IC2BA
IC2AC
Q2AC
TL346
TL231
TL233
TL234
TL230
TL232
TL228
TL227
8
L3A

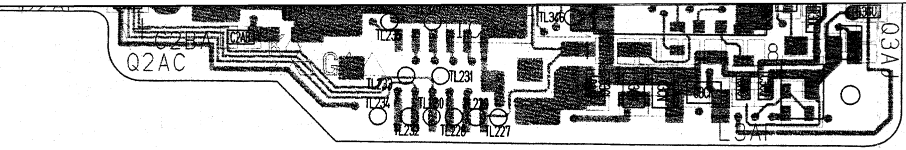


PCB-CCD(A SIDE)



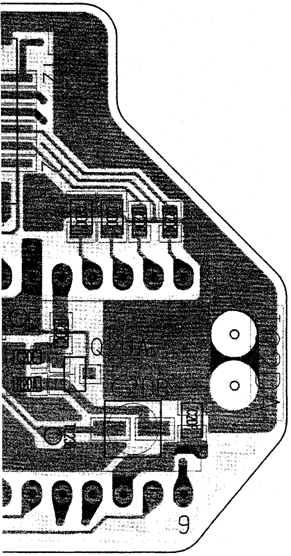
PCB-CCD(B SIDE)



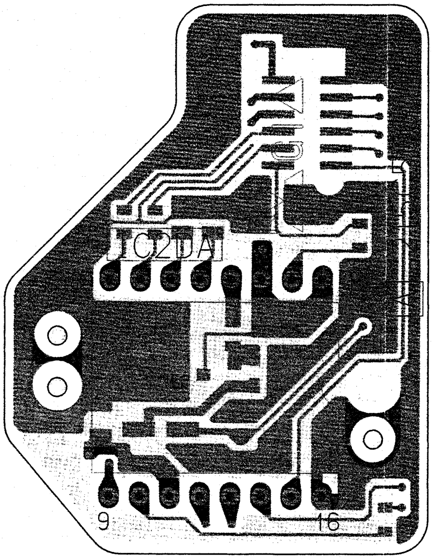

IC2DA
C2AB
Q2AC
TL231
TL230
TL234
TL232
TL228
TL227
TL346
8
L3A
Q3A

C3CL	C-3	R2AJ	C-1	R3CX	B-2		
C3CM	C-3	R2AK	C-1	R3CY	B-2		
C3CN	C-3	R2AL	C-1	R3CZ	A-2		

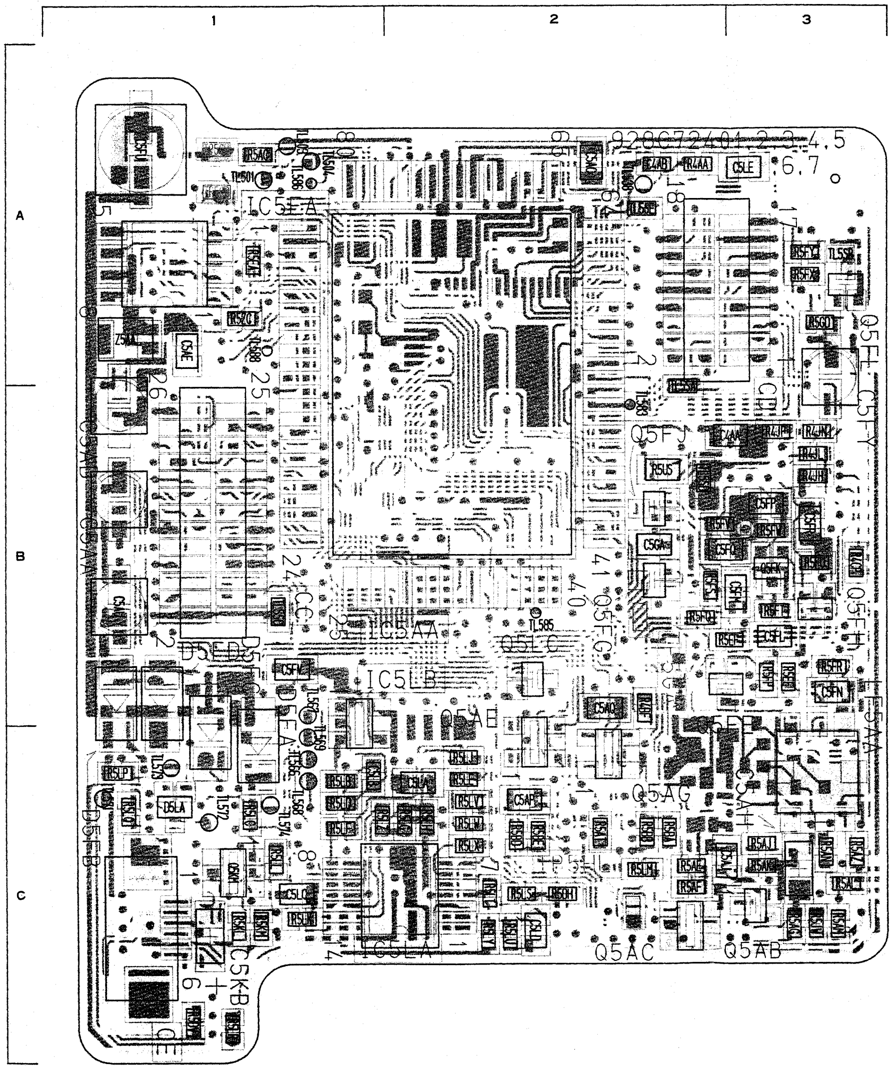
E)

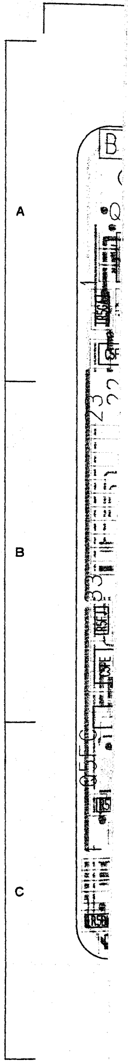


PCB-CCD(B SIDE)



PCB-CM(A SIDE)


1
2
3
A
B
C
928C72404
IC5EA
IC5AA
IC5LB
IC5LA
Q5FJ
Q5FG
Q5LC
Q5AE
Q5AG
Q5AC
Q5AB
Q5FL
Q5FE
C5FY
C5LE
C5AD
C5AA
C5KB
D5ED
D5EA
D5FB
LF5AA
Z5AA
TL585
R4AA
R4AB
R5US
C5GA
C5FM
D5LA



PCB – CM (A SIDE)

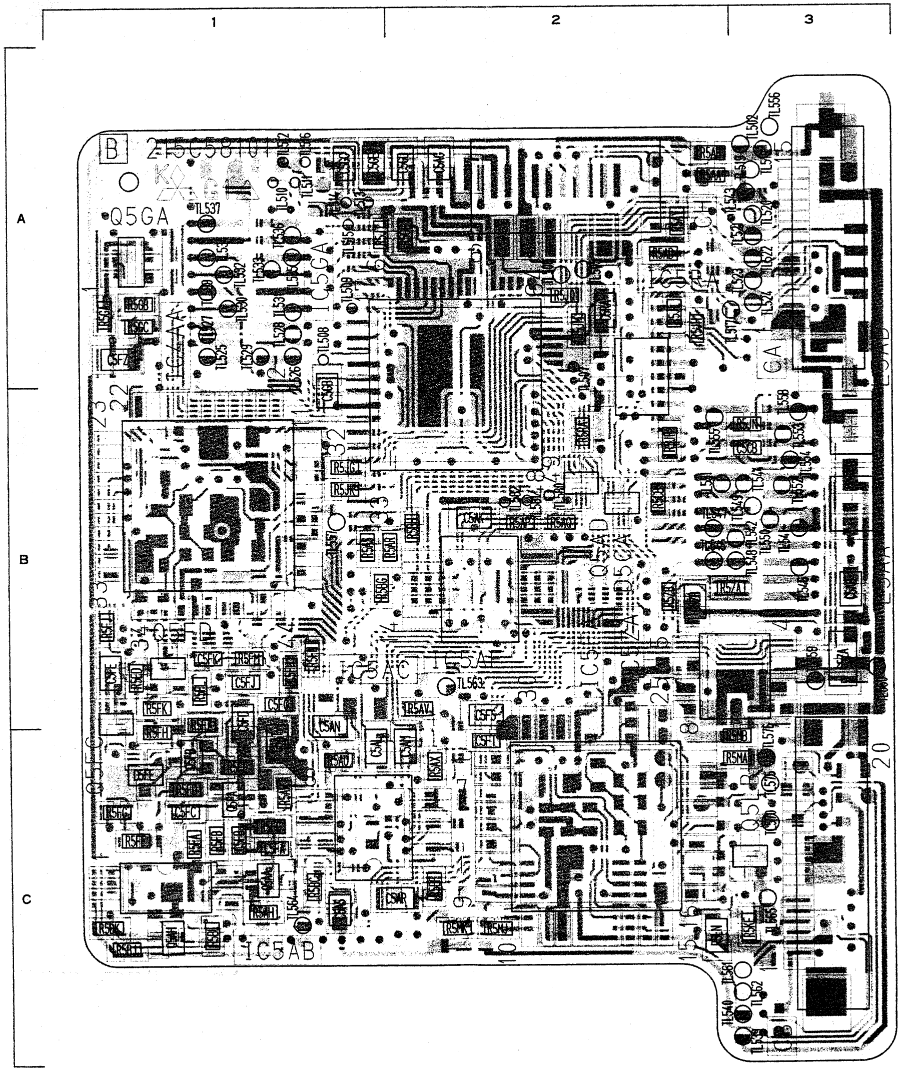
SYMBOL NO.	ADDRESS
C4AA	B-3
C4AB	A-2
C5AA	B-1
C5AC	A-2
C5AD	B-1
C5AE	A-1
C5AH	C-3
C5AJ	C-3
C5AP	C-2
C5AQ	B-2
C5AU	B-1
C5FL	B-3
C5FM	B-3
C5FN	B-3
C5FP	B-3
C5FQ	B-3
C5FR	B-3
C5FU	A-1
C5FV	B-1
C5FY	B-3
C5GA	B-2
C5KB	C-1
C5LA	C-2
C5LB	C-1
C5LC	C-1
C5LD	C-2
C5LE	A-3
D5FA	B-1
D5FB	C-1
D5FC	B-1
D5FD	B-1
D5LA	C-1
IC5AA	B-2
IC5EA	A-1
IC5LA	C-2
IC5LB	B-2
LF5AA	B-3
Q5AB	C-3
Q5AC	C-2
Q5AE	B-2
Q5AG	C-2
Q5FE	B-2
Q5FG	B-2
Q5FH	B-3
Q5FJ	B-2
Q5FK	B-3
Q5FL	A-3
Q5KM	C-1
Q5LC	B-2
R4AA	A-2
R4BF	B-2
R4CP	B-3
R4JH	B-3
R4JL	B-3
R4JN	B-3

SYMBOL NO.	ADDRESS
R4JP	B-3
R5AC	A-1
R5AE	C-2
R5AF	C-2
R5AG	C-3
R5AJ	C-3
R5AK	C-3
R5AL	C-3
R5AM	C-3
R5AN	C-3
R5AT	C-2
R5AZ	C-3
R5BA	C-2
R5BB	C-2
R5BD	C-2
R5BE	C-2
R5DH	C-2
R5DV	C-1
R5EA	A-1
R5EE	B-3
R5EF	B-3
R5FP	B-3
R5FQ	B-2
R5FR	B-3
R5FS	B-2
R5FT	B-3
R5FU	B-3
R5FV	B-2
R5FW	B-3
R5FX	A-3
R5FY	A-3
R5GD	A-3
R5JW	C-3
R5KL	C-1
R5KM	C-1
R5LB	C-1
R5LC	C-1
R5LD	C-1
R5LE	C-2
R5LF	C-1
R5LG	C-2
R5LH	C-2
R5LJ	C-2
R5LK	C-1
R5LL	C-1
R5LM	C-2
R5LP	C-1
R5LQ	C-1
R5LR	C-1
R5LS	C-2
R5LT	C-2
R5LU	C-2
R5LV	C-2
R5LW	C-2
R5LX	C-2
R5LY	C-2
R5LZ	C-1
R5US	B-2
R5ZC	A-1

SYMBOL NO.	ADDRESS
TP5GA	B-2
TP5GD	A-1
TP5GU	A-1
TP5HL	C-2
Z5AA	A-1

MBOL NO.	ADDRESS
5GA	B-2
5GD	A-1
5GU	A-1
5HL	C-2
AA	A-1

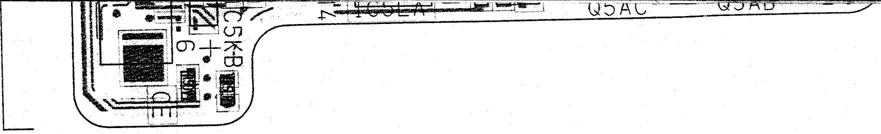
PCB-CM(B SIDE)



PCB – CM (B SIDE)

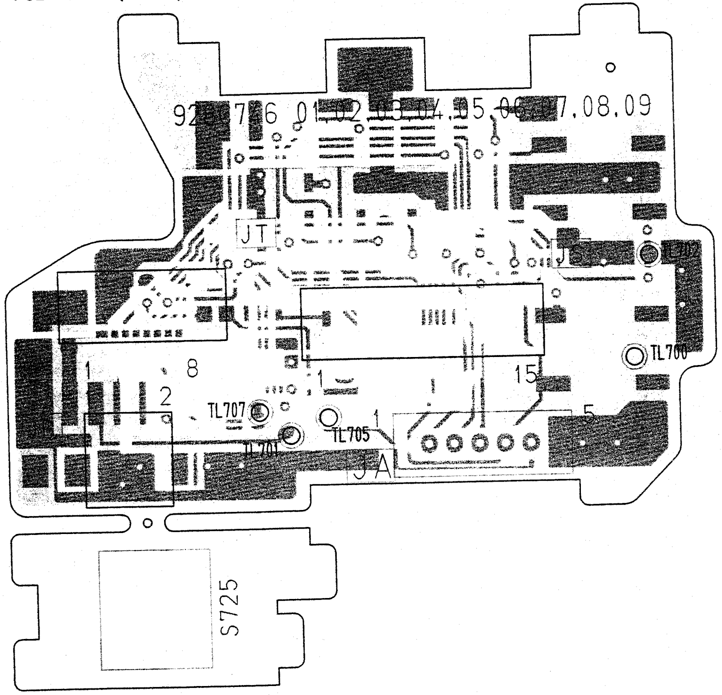
SYMBOL NO.	ADDRESS
C5AB	B-3
C5AG	A-2
C5AK	B-2
C5AL	C-1
C5AM	C-2
C5AN	B-1
C5AR	C-2
C5AS	C-1
C5AT	C-1
C5CB	B-3
C5FA	C-1
C5FB	C-1
C5FC	C-1
C5FD	B-1
C5FE	B-1
C5FG	B-1
C5FH	B-1
C5FJ	B-1
C5FK	B-1
C5FS	B-2
C5FT	C-2
C5FZ	A-1
C5GC	A-1
C5GD	A-2
C5GE	A-1
C5RA	A-2
C5ZA	B-3
C5ZB	B-2
D5CA	B-2
D5FE	C-1
IC4AA	A-1
IC5AB	C-1
IC5AC	B-1
IC5AE	B-2
IC5FA	B-2
IC5GA	A-1
IC5RA	A-2
IC5ZA	B-2
L5AA	B-3
L5AD	A-3
Q5AA	C-1
Q5AD	B-2
Q5AH	C-1
Q5FA	C-1
Q5FB	C-1
Q5FC	C-1
Q5FD	B-1
Q5GA	A-1
Q5LB	C-3
R4FE	C-1
R5AA	A-2
R5AB	A-2
R5AD	A-2
R5AH	C-1
R5AP	B-2

SYMBOL NO.	ADDRESS
R5AQ	B-2
R5AR	B-2
R5AS	B-1
R5AU	C-1
R5AV	B-2
R5AW	C-1
R5AX	C-2
R5AY	A-2
R5BC	C-1
R5BF	C-2
R5BG	B-1
R5BH	B-2
R5BJ	C-1
R5BK	C-1
R5BL	C-1
R5CB	B-2
R5ED	B-1
R5FA	C-1
R5FB	C-1
R5FC	C-1
R5FD	C-1
R5FF	C-1
R5FG	C-1
R5FH	C-1
R5FJ	B-1
R5FK	B-1
R5FL	B-1
R5FM	B-1
R5FN	B-1
R5FZ	B-1
R5GA	A-1
R5GB	A-1
R5GC	A-1
R5GE	A-2
R5JG	B-1
R5JH	A-2
R5JK	B-1
R5JL	A-2
R5JM	A-2
R5JN	B-3
R5JP	B-2
R5JQ	A-2
R5JT	A-1
R5KE	C-3
R5LN	C-2
R5MA	C-3
R5MB	C-3
R5MJ	C-2
R5MK	C-2
R5RA	B-2
R5ZA	B-3
R5ZB	B-2

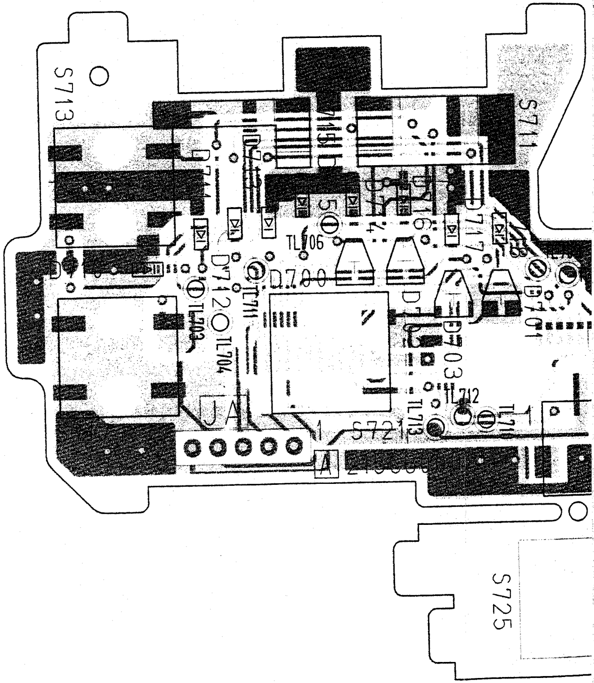

C5KB
Q5AC
Q5AB

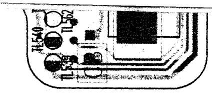
R4JL	B-3	R5ZC	A-1		
R4JN	B-3				

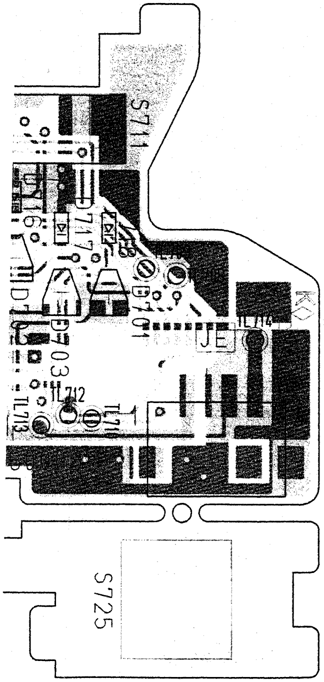
PCB-VTR SW(A SIDE)


92.7.6 01.02.03.04.05.06.07.08.09
JT
TL702
TL700
TL707
TL701
TL705
JA
1
8
2
15
5
S725

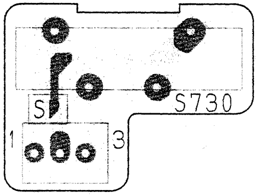
PCB-VTR SW(B SIDE)


S713
S711
D714
D715
D716
D717
D711
D712
D700
D701
D703
TL706
TL711
TL703
TL704
TL712
TL713
S721
JA
A
B701
S725

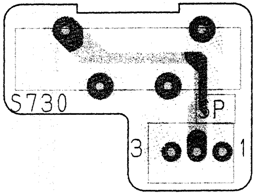

TL540
TL562

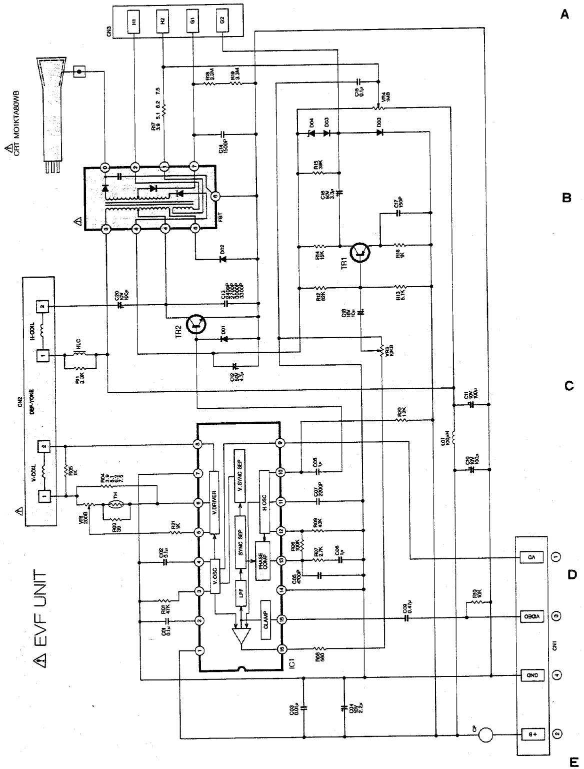

S711
D716
717
D701
JE
TL714
D703
TL712
TL713
S725

PCB-POWER SW(A SIDE)

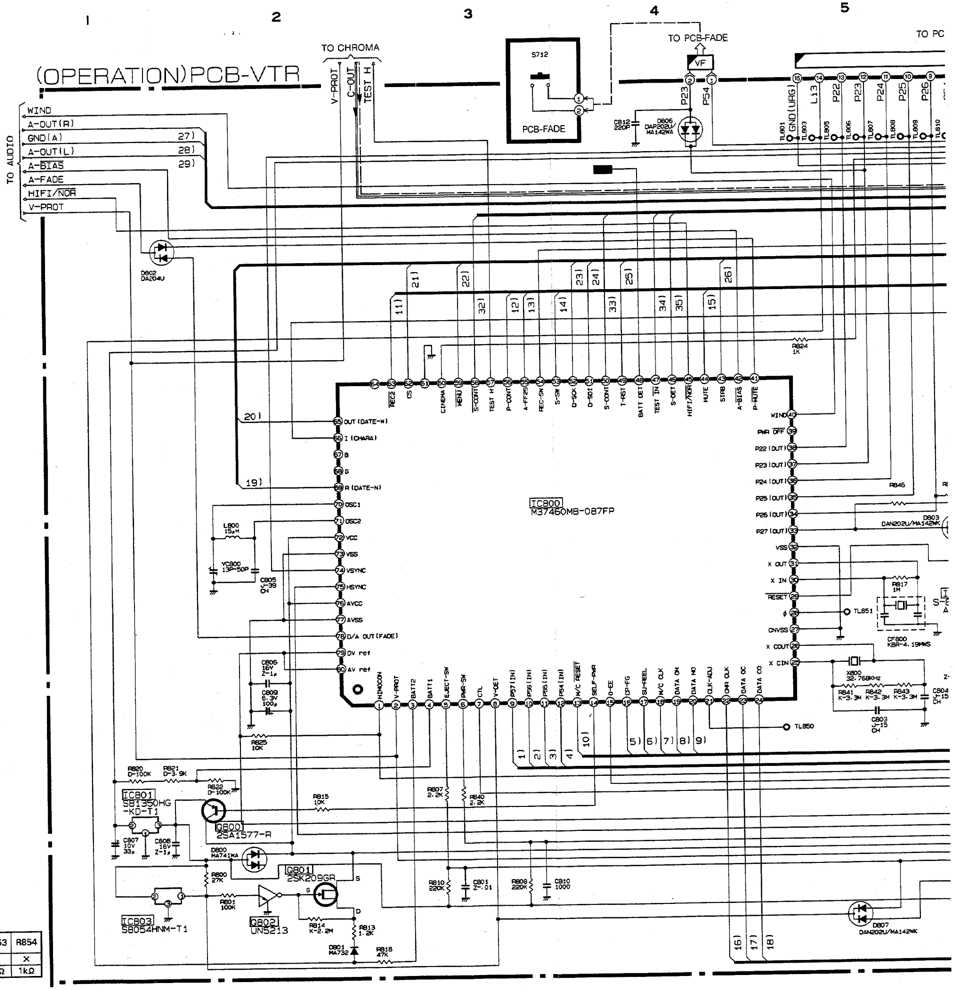


PCB-POWER SW(B SIDE)



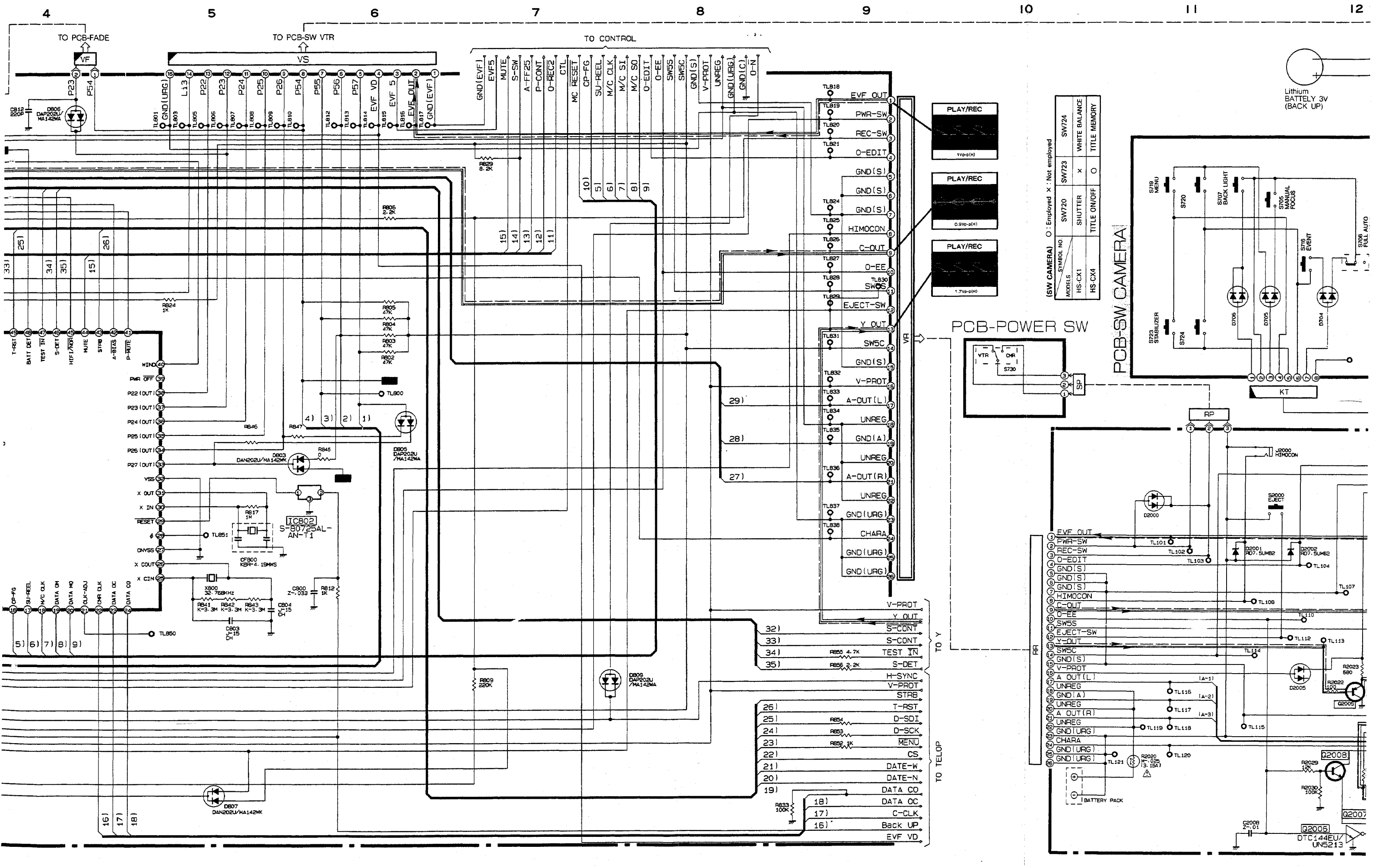


EVF UNIT
CRT M01KTA80WB
CN3
H1
H2
G1
G2
FBT
CN2
DEF-YOKE
H-COIL
V-COIL
HLC
TR1
TR2
IC1
V.DRIVER
V.OSC
V.SYNC SEP
SYNC SEP
H.OSC
PHASE COMP
LPF
CLAMP
CN1
VD
VIDEO
GND
B+
A
B
C
D
E



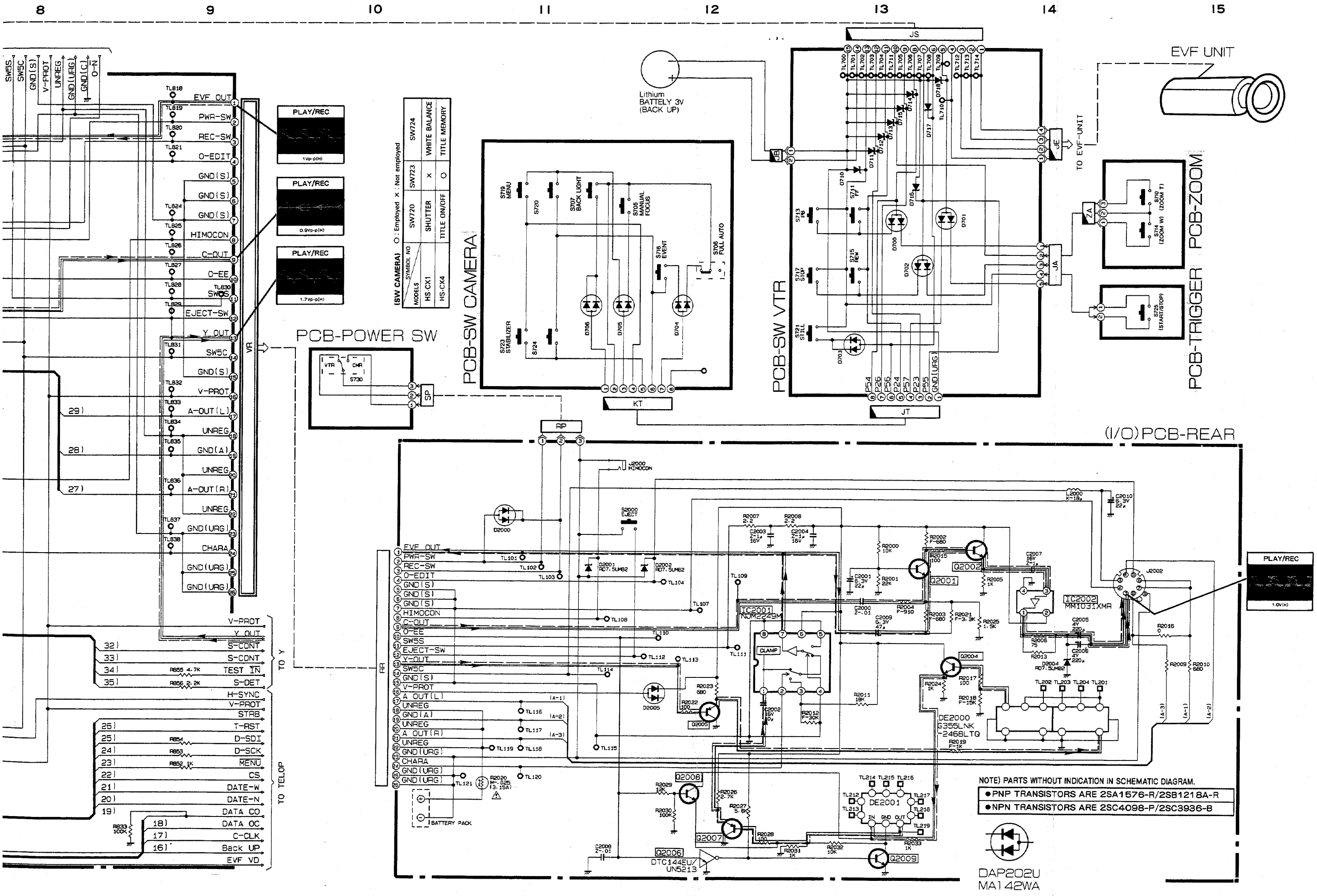
1
2
3
4
5
(OPERATION) PCB-VTR
TO AUDIO
WIND
A-OUT(R)
GND(A)
A-OUT(L)
A-BIAS
A-FADE
HIFI/NOR
V-PROT
TO CHROMA
V-PROT
C-OUT
TEST H
S712
PCB-FADE
TO PCB-FADE
VF
P23
P54
TO PC
GND(URG)
Li3
P22
P23
P24
P25
P26
D802 DA204U
D806 DAP202U/MA142WA
IC800 M37460M8-087FP
OUT (DATE-H)
I (CHARA)
B
G
R (DATE-N)
OSC1
OSC2
VCC
VSS
VSYNC
HSYNC
AVCC
AVSS
D/A OUT (FADE)
DV ref
AV ref
WIND
PWR OFF
P22 (OUT)
P23 (OUT)
P24 (OUT)
P25 (OUT)
P26 (OUT)
P27 (OUT)
VSS
X OUT
X IN
RESET
CNVSS
X COUT
X CIN
L800 15μH
VC800 13P-50P
X800 32.768KHz
CF800 KBR-4.19MWS
IC801 S81350HG -KD-T1
Q800 2SA1577-R
Q801 2SK209GR
Q802 UN5213
IC803 S8054HNM-T1
D800 MA741WA
D801 MA732
D803 DAN202U/MA142WK
D807 DAN202U/MA142WK
TL850
TL851

SYMBOL NO. MODEL	R846	R847	R853	R854
HS-CX1	0Ω	0Ω	×	×
HS-CX4	×	×	1kΩ	1kΩ


4
5
6
7
8
9
10
11
12
TO PCB-FADE
VF
TO PCB-SW VTR
VS
TO CONTROL
P23
P54
C812 220P
D806 DAP202U/MA142WA
GND(URG)
L13
P22
P23
P24
P25
P26
P54
P55
P56
P57
EVF VD
EVF 5
EVF OUT
GND(EVF)
GND(EVF)
EVF5
MUTE
S-SW
A-FF25
P-CONT
O-REC2
CTL
MC RESET
CP-FG
SU-REEL
M/C CLK
M/C SI
M/C SO
O-EDIT
O-EE
SW5S
SW5C
GND(S)
V-PROT
UNREG
GND(URG)
GND(C)
O-N
R829 8.2K
R806 2.2K
R824 1K
R805 47K
R804 47K
R803 47K
R802 47K
TL800
TL851
TL850
T-RST
BATT DET
TEST IN
S-DET
HIFI/NOR
MUTE
STRB
A-BIAS
P-MUTE
WIND
PWR OFF
P22 (OUT)
P23 (OUT)
P24 (OUT)
P25 (OUT)
P26 (OUT)
P27 (OUT)
VSS
X OUT
X IN
RESET
CNVSS
X COUT
X CIN
R846
R847
R845 0
D803 DAN202U/MA142WK
D805 DAP202U/MA142WA
R817 1M
IC802 S-80725AL-AN-T1
CF800 KBR-4.19MWS
X800 32.768KHz
R841 K-3.3M
R842 K-3.3M
R843 K-3.3M
C803 J-15 CH
C804 CH J-15
C800 Z-.033
R812 1K
CP-FG
SU-REEL
M/C CLK
DATA OM
DATA MO
CLK-ADJ
CHR CLK
DATA OC
DATA CO
R809 220K
D809 DAP202U/MA142WA
D807 DAN202U/MA142WK
R833 100K
TL818
TL819
TL820
TL821
TL824
TL825
TL826
TL827
TL828
TL829
TL830
TL831
TL832
TL833
TL834
TL835
TL836
TL837
TL838
EVF OUT
PWR-SW
REC-SW
O-EDIT
GND(S)
GND(S)
GND(S)
HIMOCON
C-OUT
O-EE
SW5S
EJECT-SW
Y OUT
SW5C
GND(S)
V-PROT
A-OUT(L)
UNREG
GND(A)
UNREG
A-OUT(R)
UNREG
GND(URG)
CHARA
GND(URG)
GND(URG)
VR
PLAY/REC
1Vp-p(H)
PLAY/REC
0.9Vp-p(H)
PLAY/REC
1.7Vp-p(H)
V-PROT
Y OUT
S-CONT
S-CONT
TEST IN
S-DET
R855 4.7K
R856 2.2K
TO Y
H-SYNC
V-PROT
STRB
T-RST
D-SDI
D-SCK
MENU
CS
DATE-W
DATE-N
DATA CO
DATA OC
C-CLK
Back UP
EVF VD
R854
R853
R852 1K
TO TELOP
PCB-POWER SW
VTR
CMR
S730
SP
RR
Lithium BATTELY 3V (BACK UP)
PCB-SW CAMERA
S719 MENU
S720
S707 BACK LIGHT
S705 MANUAL FOCUS
S716 EVENT
S708 FULL AUTO
S723 STABILIZER
S724
D706
D705
D704
KT
RP
J2000 HIMOCON
S2000 EJECT
D2000
D2001 RD7.5UMB2
D2002 RD7.5UMB2
TL101
TL102
TL103
TL104
TL106
TL107
TL110
TL112
TL113
TL114
TL115
TL116
TL117
TL118
TL119
TL120
TL121
D2005
R2023 560
R2022 100
Q2005
Q2008
R2029 12K
R2030 100K
Q2007
C2008 Z-.01
Q2005 DTC144EU/UN5213
R2020 M-.025 (3.15A)
BATTERY PACK
(A-1)
(A-2)
(A-3)

(SW CAMERA) O : Employed X : Not employed

MODELS \ SYMBOL NO.	SW720	SW723	SW724
HS-CX1	SHUTTER	X	WHITE BALANCE
HS-CX4	TITLE ON/OFF	O	TITLE MEMORY


8
9
10
11
12
13
14
15
EVF UNIT
TO EVF-UNIT
Lithium BATTELY 3V (BACK UP)
PCB-POWER SW
PCB-SW CAMERA
PCB-SW VTR
PCB-ZOOM
PCB-TRIGGER
(I/O)PCB-REAR
PLAY/REC
1Vp-p(H)
0.9Vp-p(H)
1.7Vp-p(H)
1.0V(H)
EVF OUT
PWR-SW
REC-SW
O-EDIT
GND(S)
HIMOCON
C-OUT
O-EE
SW5S
EJECT-SW
Y OUT
SW5C
V-PROT
A-OUT(L)
UNREG
GND(A)
A-OUT(R)
GND(URG)
CHARA
VR
SP
RP
KT
JT
JS
JE
JB
JA
ZA
TG
RR
TO Y
TO TELOP
S-CONT
TEST IN
S-DET
H-SYNC
STRB
T-RST
D-SDI
D-SCK
MENU
CS
DATE-W
DATE-N
DATA CO
DATA OC
C-CLK
Back UP
EVF VD
S719 MENU
S720
S707 BACK LIGHT
S705 MANUAL FOCUS
S716 EVENT
S706 FULL AUTO
S723 STABILIZER
S724
S713 PB
S711 FF
S715 REW
S717 STOP
S721 STILL
S710 (ZOOM T)
S714 (ZOOM W)
S725 (START/STOP)
S730
VTR
CMR
S2000 EJECT
J2000 HIMOCON
J2002
BATTERY PACK
IC2001 NJM2249M
CLAMP
IC2002 MM1031XMR
DE2000 G355LNK -2468LTQ
DE2C01
Q2001
Q2002
Q2004
Q2005
Q2006 DTC144EU/ UN5213
Q2007
Q2008
Q2009
D2000
D2001 RD7.5UMB2
D2002 RD7.5UMB2
D2004 RD7.5UMB2
D2005
DAP202U MA142WA

(SW CAMERA) MODELS / SYMBOL NO	SW720	SW723	SW724
HS-CX1	SHUTTER	×	WHITE BALANCE
HS-CX4	TITLE ON/OFF	○	TITLE MEMORY

○: Employed ×: Not employed

NOTE) PARTS WITHOUT INDICATION IN SCHEMATIC DIAGRAM.

- ●PNP TRANSISTORS ARE 2SA1576-R/2SB1218A-R
- ●NPN TRANSISTORS ARE 2SC4098-P/2SC3936-B